

**MECHANICAL DATA**

Bulb . . . . .	T-9
Base . . . . .	Octal
Outline . . . . .	See Drawing
Basing . . . . .	See Drawing
Output Cathodes . . . . .	No. 0, 5, 8, and 9
Zero Position . . . . .	No. 0 Cathode Aligned with Pin No. 6 $\pm 10^\circ$
Mounting Position . . . . .	Any

**ELECTRICAL DATA**

**INTERELECTRODE CAPACITANCES (Approx.)**

Any Cathode to All Other Elements . . . . .	4.2 pf
Guide No. 2 to All Other Elements . . . . .	10 pf
Guide No. 1 to All Other Elements . . . . .	11 pf

**RATINGS (Absolute Values)**

	<b>Min.</b>	<b>Max.</b>
Anode Supply Voltage <sup>1</sup> . . . . .	400	800 Volts
Voltage Between Electrodes (Other than Anode) . . . . .	—	140 Volts
Transfer Voltage . . . . .	35	140 Volts
Anode Current . . . . .	0.6	0.8 Ma
Input Frequency . . . . .	0	100 Kpps
Ambient Temperature . . . . .	-55	+60 °C

**TYPICAL OPERATING CHARACTERISTICS**

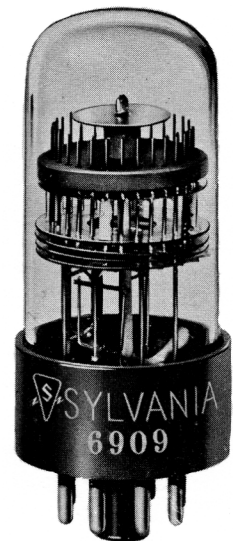
Anode Supply Voltage <sup>1</sup> . . . . .	400 Volts	
Nominal Tube Drop . . . . .	235 Volts	
Guide Bias . . . . .	+45 Volts	Min.
Square Double Pulse Drive Amplitude (Each Pulse) <sup>2</sup> . . . . .	-85 Volts	Min.
Square Double Pulse Width (Each Pulse) <sup>2</sup> . . . . .	4 $\mu$ Sec.	Min.
Forced Reset Pulse Amplitude . . . . .	-120 Volts	Min.
Forced Reset Pulse Width . . . . .	4 $\mu$ Sec.	Min.
Cathode Load Resistor <sup>3</sup> . . . . .	50 K-Ohms	Max.

**NOTES:**

1. A value for the anode resistor can be computed by subtracting the nominal tube drop from the supply voltage and dividing the remainder by the desired operating current.
2. Two separate pulses, back to back or with slight overlap, must be maintained.
3. The peak pulse output voltage can be determined by the IR drop across the chosen cathode resistor.
4. A counter tube brochure is available on request from Sylvania Electric Products Inc., 1100 Main Street, Buffalo 9, New York.

**QUICK REFERENCE DATA**

The Type 6909 is a cold cathode, bidirectional decade counter tube with top viewed readout. It is designed to operate at inputs up to 100,000 pulses per second. Cathodes No. 0, 5, 8, and 9 are brought out to individual base pins. Applications include computing, scaling, counting, frequency dividing, coding, modulating, matrixing, indexing, multiplexing, addition and subtraction. (See Note 4.)



**SYLVANIA  
ELECTRONIC TUBES**  
A Division of  
Sylvania Electric Products Inc.  
**RECEIVING TUBE  
OPERATIONS**  
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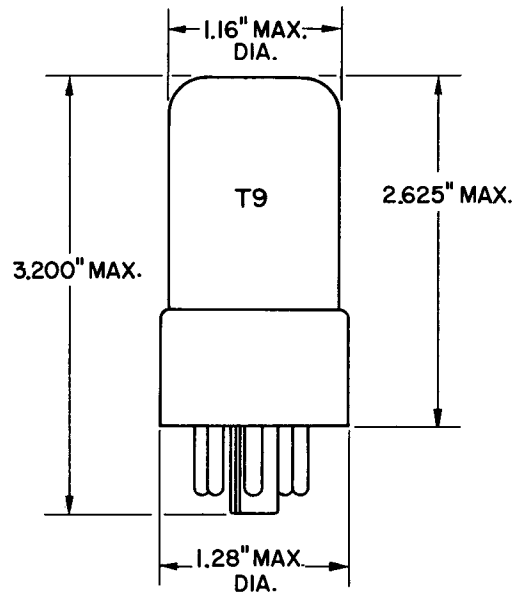
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*File Under*  
**SPECIAL PURPOSE  
ELECTRONIC TUBES**

OUTLINE



BASE CONNECTIONS

