

## Voltage-Regulator

**GLOW-DISCHARGE TYPE**

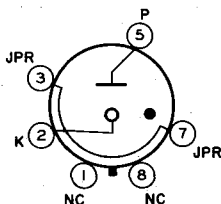
**105 VOLTS**

**For Applications Requiring a Relatively  
Constant DC Output Voltage, Independent  
of Load and Supply-Voltage Variations**

**Mechanical:**

Operating Position . . . . .	Any
Type of Cathode . . . . .	Cold
Maximum Overall Length . . . . .	3-1/16"
Maximum Seated Length . . . . .	2-1/2"
Maximum Diameter . . . . .	1-9/32"
Dimensional Outline . . . . .	See <i>General Section</i>
Bulb . . . . .	T9
Base . . . . .	Intermediate-Shell Octal 6-Pin, Arrangement 1 (JEDEC Group 1, No. B6-8)
Basing Designation for BOTTOM VIEW . . . . .	4AJ

- Pin 1 - No Internal Connection
- Pin 2 - Cathode
- Pin 3 - Jumper<sup>a</sup>
- Pin 5 - Anode
- Pin 7 - Jumper<sup>a</sup>
- Pin 8 - No Internal Connection



### VOLTAGE REGULATOR

**Maximum and Minimum Ratings, Absolute-Maximum Values:**

Average Cathode Starting Current <sup>b</sup> . . . . .	100 max.	ma
DC Cathode Current . . . . .	{ 40 max.	ma
	{ 5 min.	ma
DC or AC Jumper Current . . . . .	2 max.	amp
Ambient-Temperature Range . . . . .	-55 to +90	°C

**Circuit Values:**

Shunt Capacitor . . . . .	0.1 max.	μf
Series Resistor . . . . .	See <i>Operating Considerations</i>	

<sup>a</sup> With suitable socket connections, the jumper within the tube base (between pins 3 and 7) provides for opening the power-supply circuit to protect circuit components when the voltage-regulator tube is removed from its socket.

<sup>b</sup> Averaged over starting period not exceeding 10 seconds. When starting currents greatly in excess of the maximum dc-cathode-current rating of 40 milliamperes are encountered, it may be necessary to operate these tubes as much as 20 minutes under steady-state conditions to assure stable operation.



# OC3A

## CHARACTERISTICS RANGE VALUES

Values are initial unless otherwise specified

	Note	Min.	Av.	Max.	
DC Anode Supply Voltage. . . . .					See Note 1
DC Anode Starting Voltage in:					
Total darkness . . . . .	-	-	-	210	volts
Normal ambient light (5 to 50 footcandles). . . . .	-	-	115	127	volts
Anode Voltage Drop for dc cathode current of:					
5 ma. . . . .	-	105	-	-	volts
30 ma. . . . .	-	105	109	111	volts
40 ma. . . . .	-	105	110	112	volts
Regulation for dc-cathode- current range of:					
5 to 30 ma. . . . .	2	-	1	2	volts
5 to 40 ma. . . . .	2	-	2	4	volts
Tube Noise for dc cathode current of 40 ma. . . . .	-	-	-	15	rms mv
DC Leakage Current for dc anode supply voltage of 50 volts and anode resistor of 3000 ohms . . . . .	-	-	-	10	$\mu$ a

Note 1: The minimum value to insure starting throughout useful tube life must be equal to the dc anode starting voltage plus the voltage drop across the series resistor at the maximum value of the load current.

Note 2: The maximum values for the specified regulation range apply throughout useful tube life.

## OPERATING CONSIDERATIONS

shown under Type OA3A also apply to the OC3A

