



OC2

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# VOLTAGE REGULATOR

7-PIN MINIATURE, 75-VOLT, GLOW-DISCHARGE TYPE

## GENERAL DATA

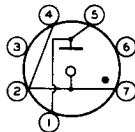
### Electrical:

Cathode . . . . . Cold

### Mechanical:

Operating Position . . . . . Any  
 Maximum Overall Length . . . . . 2.63"  
 Maximum Seated Length . . . . . 2.38"  
 Length, Base Seat to Bulb Top (Excluding tip). 2.00" ± 0.09"  
 Maximum Diameter . . . . . 0.75"  
 Dimensional Outline . . . . . See General Section  
 Bulb . . . . . T5-1/2  
 Base . . . . . Small-Button Miniature 7-Pin (JETEC No. E7-1)  
 Basing Designation for BOTTOM VIEW . . . . . 5B0

Pin 1 - Anode  
 Pin 2 - Cathode  
 Pin 3 - Internal  
 Connection—  
 Do Not Use  
 Pin 4 - Cathode



Pin 5 - Anode  
 Pin 6 - Internal  
 Connection—  
 Do Not Use  
 Pin 7 - Cathode

### Maximum and Minimum Ratings, Absolute Values:

|   |            |     |
|---|------------|-----|
| AVERAGE STARTING CURRENT <sup>▲</sup> . . . . . | 75 max.    | ma  |
| DC CATHODE CURRENT . . . . .                    | { 30 max.  | ma  |
|   | { 5 min.   | ma  |
| FREQUENCY . . . . .                             | 0 max.     | cps |
| AMBIENT-TEMPERATURE RANGE . . . . .             | -55 to +90 | °C  |

### Maximum Circuit Values:

Shunt Capacitance . . . . . 0.1 max.  $\mu$ f

## CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

|   | Min.            | Av. | Max.  |       |
|---|-----------------|-----|-------|-------|
| DC Anode-Supply Voltage . . . . .               | *               | -   | -     | volts |
| Anode Breakdown Voltage:                        |                 |     |       |       |
| Under total darkness . . . . .                  | -               | -   | 145** | volts |
| Under normal ambient light conditions . . . . . | -               | 105 | 115** | volts |
| Anode Voltage Drop . . . . .                    | 68 <sup>●</sup> | 75  | 83    | volts |
| Regulation (5 to 30 ma.) . . . . .              | -               | 3   | 4.5   | volts |

<sup>▲</sup> Averaged over starting period not exceeding 10 seconds. This starting period must be followed by a steady-state operating condition of at least 20 minutes, or tube performance will be impaired.

\* The minimum value to insure "starting" throughout tube life must be equal to the anode breakdown voltage plus the voltage drop across the series resistor at the maximum value of the load current.

\*\* Maximum individual tube value during useful life.

● Minimum individual tube value during useful life.



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### OPERATING CONSIDERATIONS

*Sufficient resistance must always be used in series with the OC2 to limit the current through the tube.*

The value for the series resistor is dependent on the dc supply voltage, anode voltage drop, load current, and cathode current and should be chosen to limit the operating current through the tube to 30 milliamperes at all times after the starting period.