



# 6073

## VOLTAGE REGULATOR

### Miniature Glow-Discharge Type

TENTATIVE DATA

RCA-6073 is a cold-cathode, glow-discharge tube of the miniature type having very stable characteristics. It is intended for voltage-regulator applications critical as to excessive shock and vibration.

#### GENERAL DATA

Cathode. . . . .	Cold
Maximum Instantaneous Impact Acceleration <sup>⊕</sup> . . . . .	900g
Maximum Vibrational Acceleration for Extended Periods <sup>●</sup> . . . . .	2.5g

#### Mechanical:

Mounting Position. . . . .	Any
Maximum Overall Length . . . . .	2-5/8"
Maximum Seated Length. . . . .	2-3/8"
Length from Base Seat to Bulb Top (Excluding tip). . . . .	2" ± 3/32"
Maximum Diameter . . . . .	3/4"
Bulb . . . . .	T-5-1/2
Base . . . . .	Small-Button Miniature 7-Pin (JETEC No. E7-1)

#### Maximum Ratings, Absolute Values:

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

#### Characteristics Range Values for Equipment Design:

	Min.	Av.	Max.	
DC Anode-Supply Voltage. . . . .	185 <sup>▲</sup>	-	-	volts
Anode Breakdown Voltage. . . . .	-	156	185 <sup>⊞</sup>	volts
Anode Voltage Drop . . . . .	140 <sup>★</sup>	151	168 <sup>⊞</sup>	volts
Regulation (5 to 30 ma). . . . .	-	2	6 <sup>⊞</sup>	volts

#### Circuit Values:

Shunt Capacitor. . . . .	-	-	0.1	μf
Series Resistor. . . . .	See Note 1			

- ⊕ Forces in any direction as applied by the NRL Standard High-Impact Shock Machine for Electronic Devices or its equivalent.
- Vibrational forces in any direction at 25 cycles per second for a period not exceeding 96 hours.
- Averaged over starting period not exceeding 10 seconds. When equipment utilizing the 6073 is "turned on", a starting current in excess of the average operating current is permissible as indicated under Maximum Ratings.



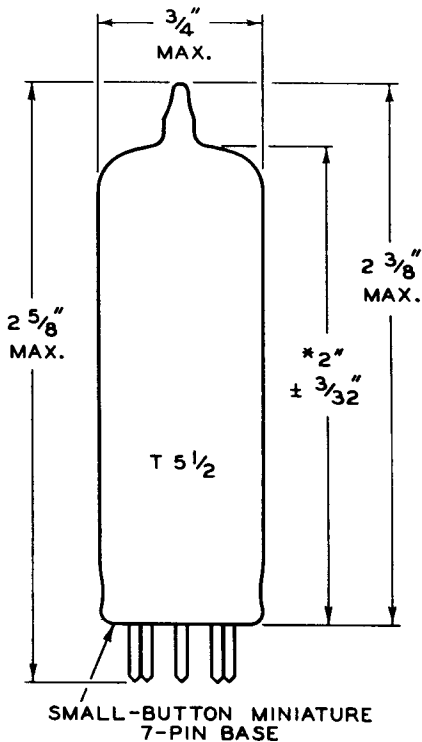
6073

When the tube is subjected to such high starting currents, the regulated voltage may require up to 20 minutes to drop to its normal operating value. This performance is characteristic of voltage-regulator tubes of the glow-discharge type. Similarly, the regulation is affected by changes in current within the operating current range. For example, the regulation of a tube operated for a protracted period at 5 milliamperes and then changed to 25 milliamperes, may be somewhat different from the value that will be obtained after a long period of operation at 25 milliamperes. Likewise, the regulation may change somewhat after a long idle period.

- ▲ Not less than indicated supply voltage should be provided to insure "starting" throughout tube life.
- ⊞ Maximum individual tube value during life.
- ★ Minimum individual tube value during life.

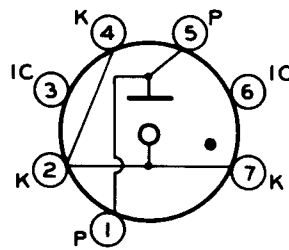
Note 1: A series resistor must always be used with the 6073. The resistance value must be chosen so that the maximum current rating (30 ma) of the 6073 is not exceeded at the highest anode-supply voltage employed, and so that the minimum current rating (5 ma) is always exceeded at the lowest anode-supply voltage.

### DIMENSIONAL OUTLINE



\* MEASURED FROM BASE SEAT TO BULB-TOP LINE AS DETERMINED BY RING GAUGE OF 7/16" I.D.

### SOCKET CONNECTIONS Bottom View



5B0

- PIN 1 - ANODE
- PIN 2 - CATHODE
- PIN 3 - INTERNAL CON.  
DO NOT USE
- PIN 4 - CATHODE
- PIN 5 - ANODE
- PIN 6 - INTERNAL CON.  
DO NOT USE
- PIN 7 - CATHODE