

**NUMERICAL INDICATOR****engineering data report****6844A****(BD-302) NIXIE\***

The 6844A (BD-302) is an improved version of the type 6844. This tube is a gas-filled, cold cathode, 10-digit ("0" through "9"), numerical indicator tube, having a common anode with a suppressor screen to minimize darkening of the viewing dome. This tube features a cup design providing a non-glare background. It is intended for use as a direct in-line read-out device.

**MECHANICAL DATA**  
 (SEE FIGURE 1)

Overall Length .....	1.380" Max.
Seated Height .....	1.125" Max.
Bulb Diameter .....	1.080" Max.
Envelope Connections .....	See Figure 2
Height of Numerals .....	0.610" Nom.
Numerical Design (Human Engineering) .....	See Figure 3
Socket, 13-Pin (#HSK-106 or HSK-112) .....	See Figure 4
Weight .....	1 oz. Max.
Mounting Position .....	See Note 1
Cathode(s) .....	Glow Discharge
Shock .....	350 G's (30° Hammer)
Vibration .....	10 G's, 60 Cps.
Temperature .....	-65° C. through +70° C., Note 2
Altitude .....	70,000 Feet

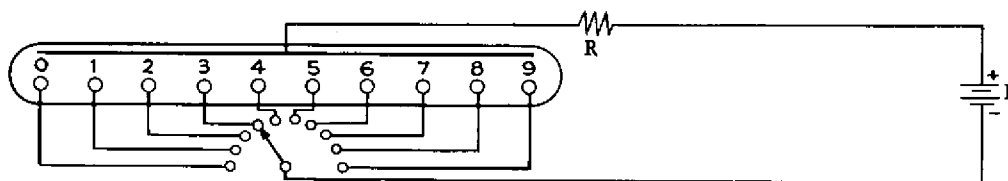
**ELECTRICAL DATA**

## 1. ABSOLUTE RATINGS:

Ionization Voltage .....	170 Vdc Minimum
Anode Current .....	
Peak .....	4.0 MA
Average .....	2.5 MA Max.
Individual Cathode Wattage .....	0.4 Watts Max.

## 2. TEST CONDITIONS: (See Typical Circuit)

Anode Supply Voltage .....	170 Vdc
Anode Series Resistor .....	15 K Ohms
Anode Current .....	1.5 MA Min. 2.5 MA Max.

**TYPICAL CIRCUIT**


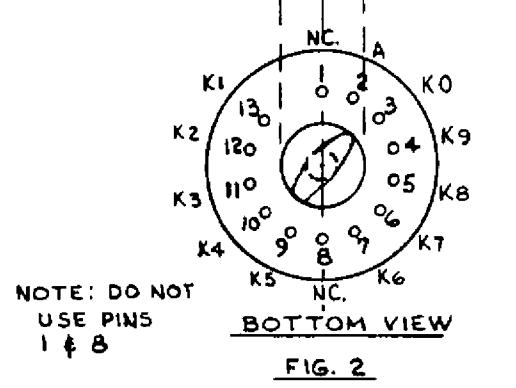
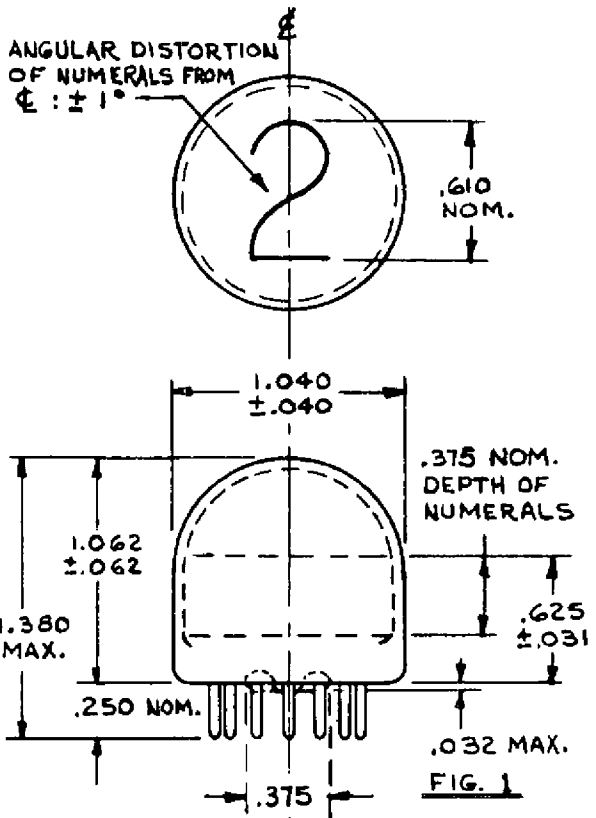
(SEE NOTE 3)

**RECOMMENDED OPERATING CONDITIONS**

E	R
170V	15K
250V	47K
300V	75K

**NOTES**

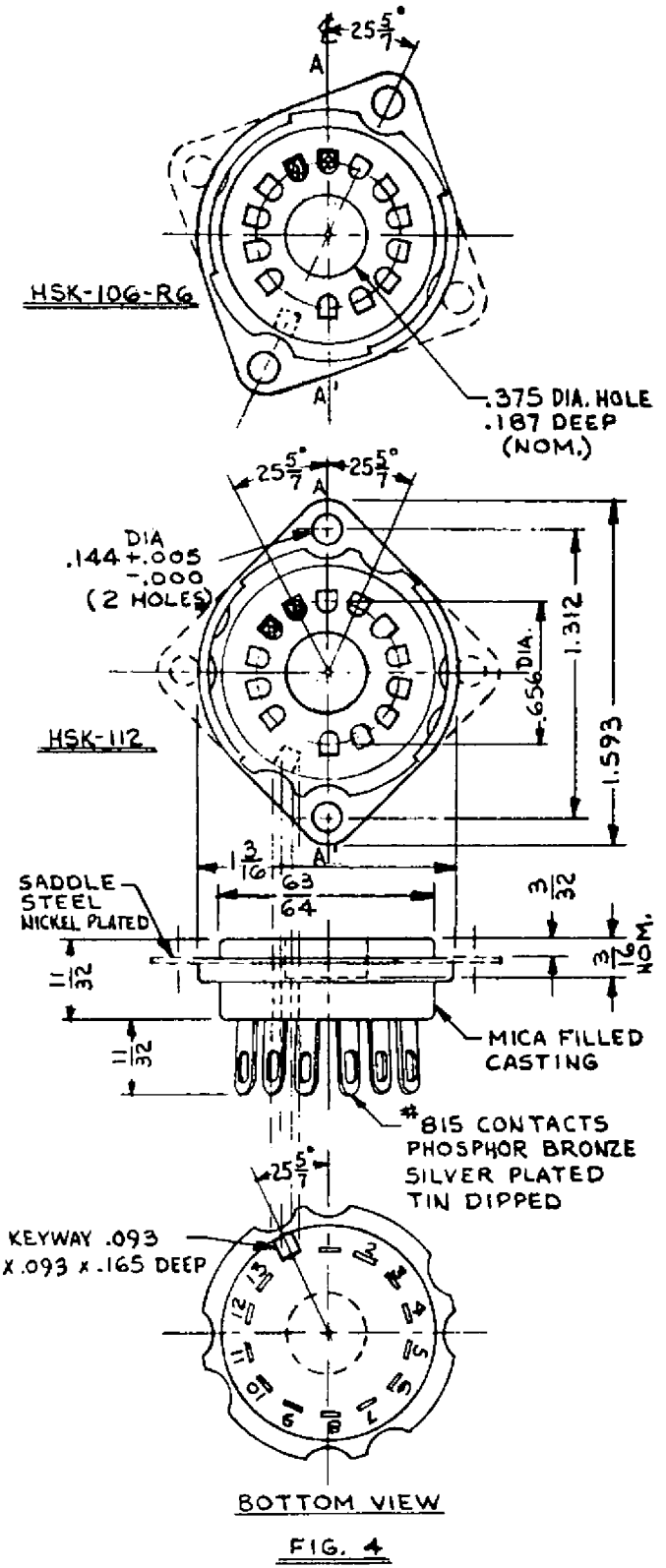
- (1) The tube socket is oriented with respect to the viewing position so that A — A', intersecting the center of Pins 1 and 8 is vertical with Pin 8 on top. This orients the numerals in the correct vertical position. The numerals are viewed through the top of the tube.
- (2) From +30° C. to +70° C., no significant change in cathode current occurs. From +30° C. to -65° C. an increase in cathode (Up to 50%) may be expected.
- (3) Recommend highest voltage available be selected with corresponding series resistor.



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(REF. WADC TR 54-160 APPENDIX PAGE 102)

FIG. 3



**Electronic Tube Division**  
 BURROUGHS CORPORATION  
 Plainfield, New Jersey

AN APPLICATIONS ENGINEERING DEPARTMENT,  
 OFFERING ENGINEERING SERVICE AND CONSULTATION,  
 HAS BEEN SET UP TO ASSIST YOU IN TAKING FULL ADVANTAGE  
 OF THIS DEVICE. WRITE FOR FURTHER INFORMATION.