

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

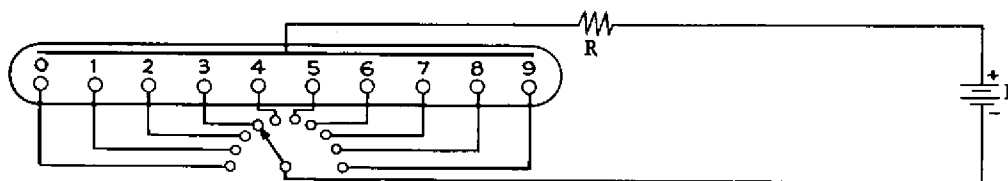
1. ABSOLUTE RATINGS:

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 Voltage170 Vdc
Anode Series Resistor15 K Ohms
Anode Current1.5 MA Min.
 2.5 MA Max.

TYPICAL CIRCUIT



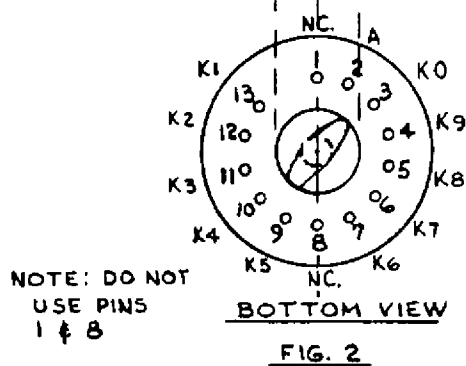
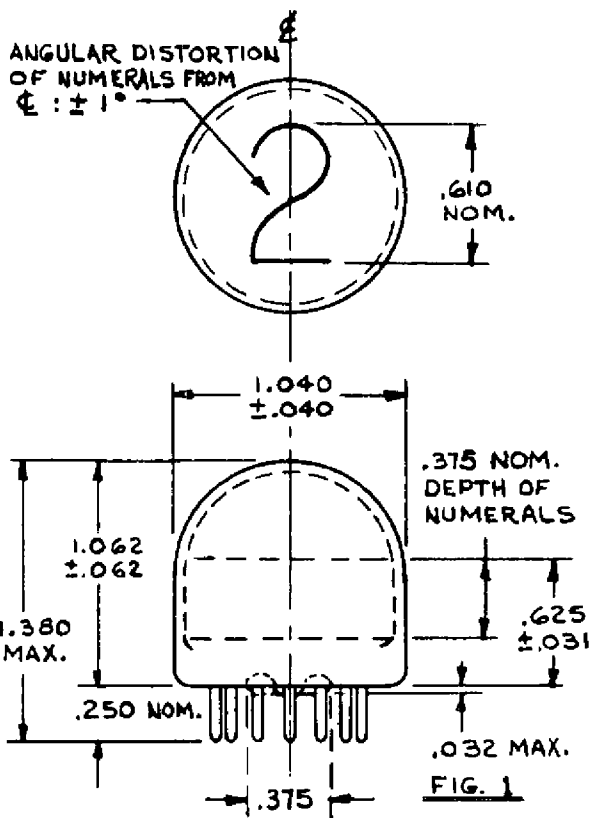
(SEE NOTE 3)

RECOMMENDED OPERATING CONDITIONS

<u>E</u>	<u>R</u>
170V	15K
250V	47K
300V	75K

NOTES

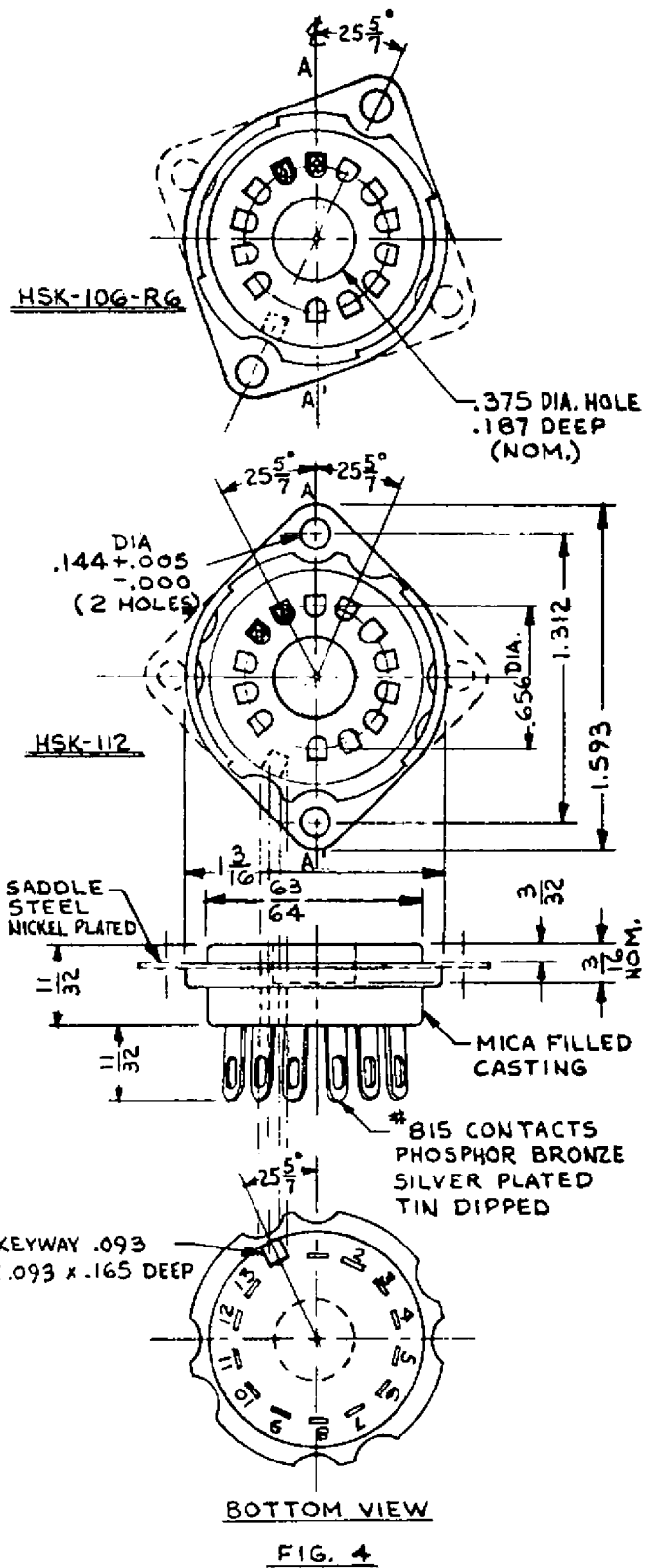
- (1) The tube socket is oriented with respect to the viewing position so that A — A', intersecting the center of Pins 1 and 8 is vertical with Pin 8 on top. This orients the numerals in the correct vertical position. The numbers are viewed through the top of the tube.
- (2) From +30° C. to +70° C.,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



1234567890

(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.