# NUMERICAL INDICATOR

## engineering data report

# 6844

## (NIXIE*) (HB-106)



The 6844 is a gas-filled, cold cathode, 10-digit ("0" through "9"), numerical indicator tube, having a common anode. It features a suppressor screen to minimize darkening of the viewing dome. It is intended for use as a direct, in-line, read-out device.

### MECHANICAL (SEE FIG. 1)

| | |
|---|---|
| Overall length | 1.380" Max. |
| Seated Height | 1.125" Max. |
| Bulb Diameter | 1.080" Max. |
| Envelope Connections | See Fig. 2 |
| Height of Numerals | 0.610" Nom. |
| Numeral Design (Human Engineering) | See Fig. 3 |
| Socket, 13-Pin (#HSK-106 or HSK-112) | See Fig. 4, Note 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 Ft. |

### ELECTRICAL

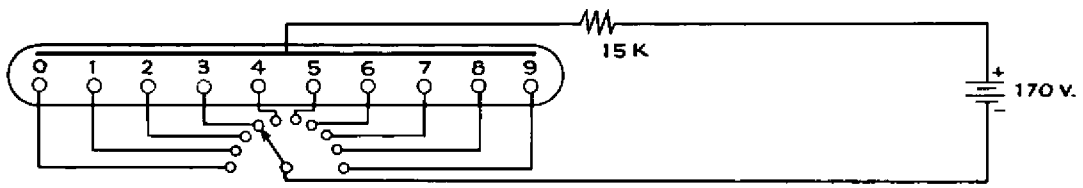
1. ABSOLUTE RATINGS

| | |
|---|---|
| Ionization Voltage | 170 Vdc Minimum |
| Anode Current | |
| Peak | 4.0 MA, Note 3 |
| Average | 2.2 MA Max. |
| Individual Cathode Wattage | 0.38 Watts Max. |

2. TEST CONDITIONS (See Typical Circuit)

| | |
|---|---|
| Anode Supply Voltage | 170 Vdc |
| Anode Series Resistor | 15K ohms |
| Anode Current | 1.0 MA Min. −2.2 MA Max. |

### TYPICAL CIRCUIT




### NOTES

1. The tube socket is oriented with respect to the viewing position so that A——A¹, 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 current (Up to 50%) may be expected.
3. It is recommended that the cathode current be kept at its lowest possible value for complete numeral glow in order to obtain maximum life.
4. HSK-112 available early 1957.

* Reg. Trade Mark.

from JETEC release #1821, Jan. 7, 1957

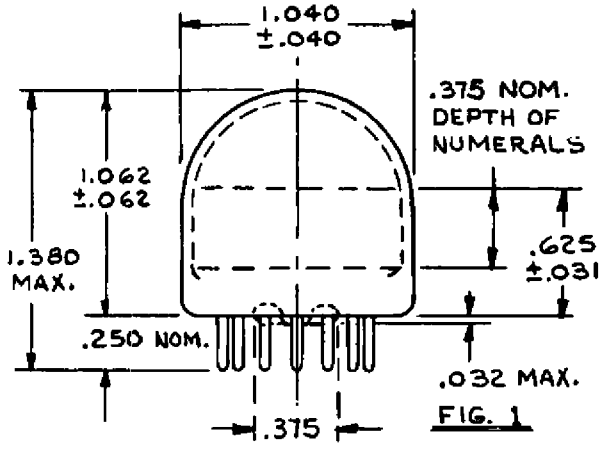
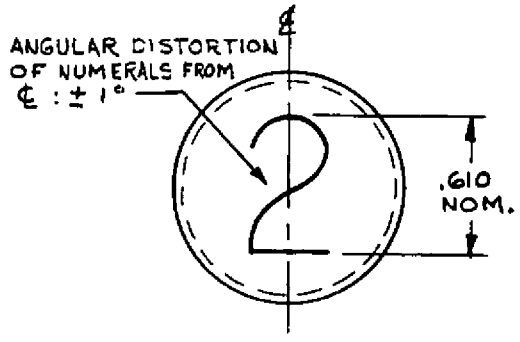



FIG. 1



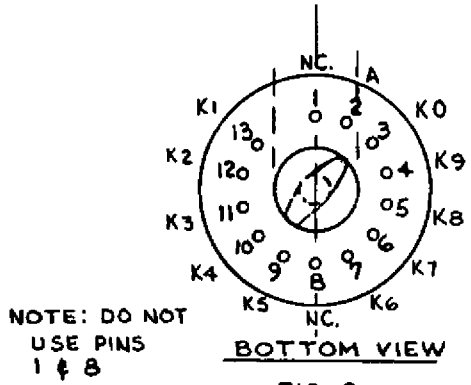
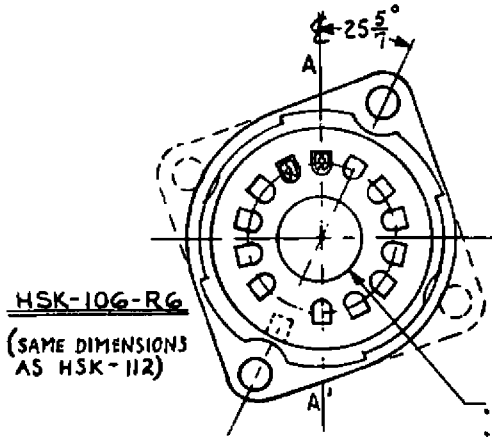



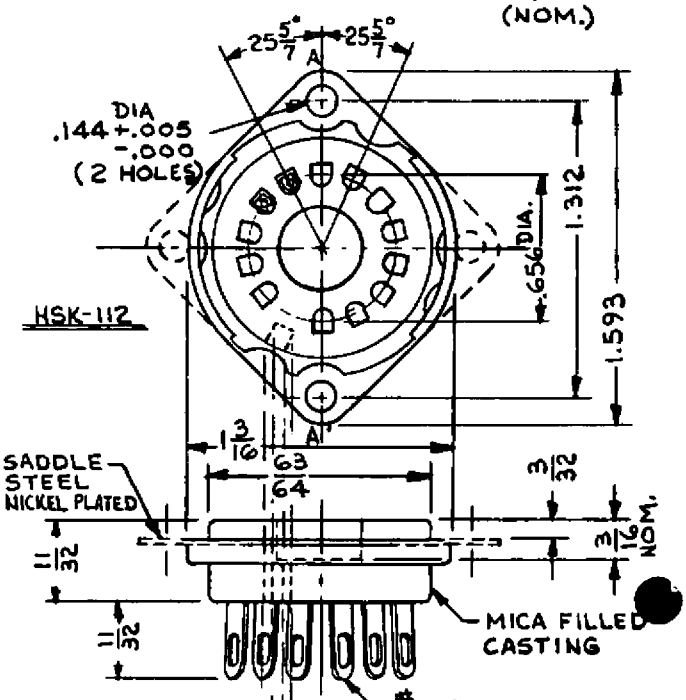

FIG. 2

1234567890

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

FIG. 3



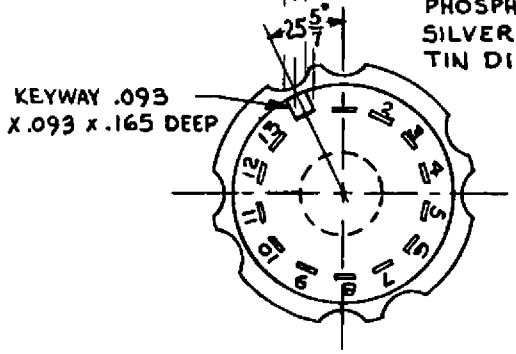




FIG. 4

**Electronic Tube Division**

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