

NUMERICAL INDICATOR



engineering data report

6844A

(BD-302) NIXIE*

NUMERICAL INDICATOR
Type 6844A (BD302)

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

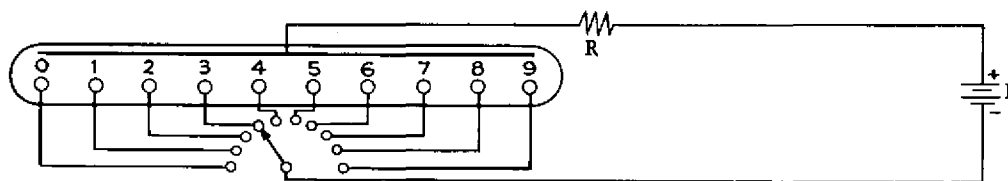
1. ABSOLUTE RATINGS:

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 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 (Up to 50%) may be expected.
- (3) Recommend highest voltage available be selected with corresponding series resistor.

