

# GAS NOISE SOURCE, NEON



## DESCRIPTION

This tube is designed for use as a noise source in super high frequency (SHF) measurements. It is constructed for use with the RG-52/U waveguide to provide noise in the 2.4 - 3.6 cm waveband. When used in the standard mount assembly, it functions as an untuned termination over the entire recommended transmission bandwidth of the guide.

## OPERATING CHARACTERISTICS

The use of pure inert gas eliminates the dependence of noise output on the operating temperature. The noise source is available for measurement at zero warm-up time with little change due to ambient temperature variations.

The performance of the tube is non-critical with respect to variations in the discharge current.

The maximum voltage standing wave ratio (VSWR) over the recommended transmission bandwidth of the guide is about 1.15. The noise temperature is  $18 \pm 0.5$  db above  $290^\circ$  K.

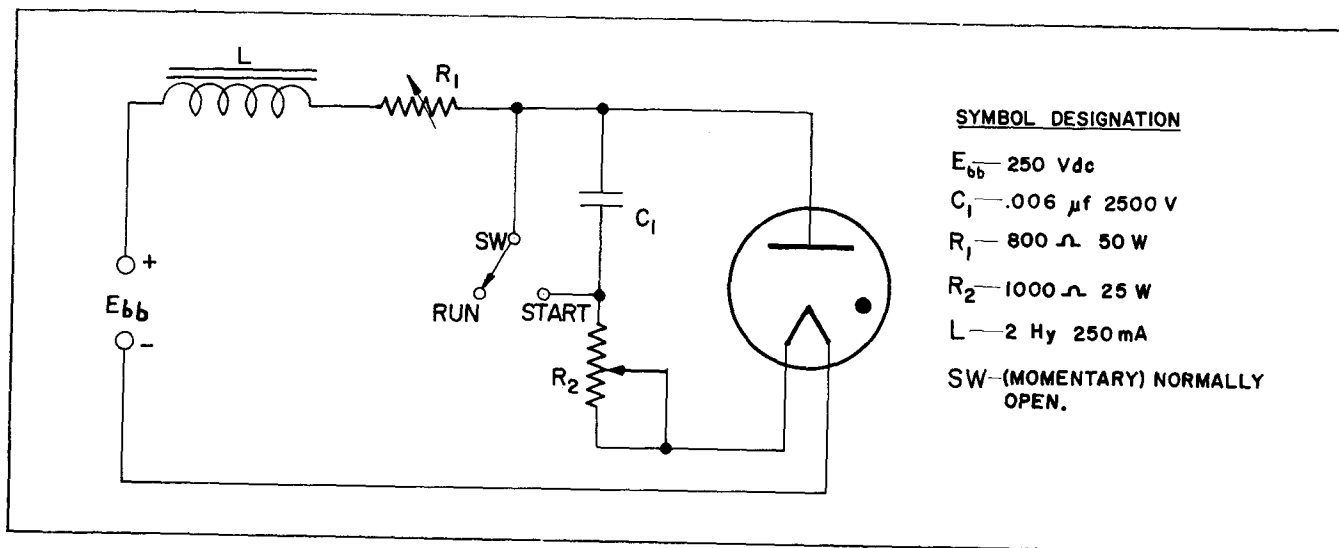
The operating circuit should have sufficient series resistance to limit the current through the tube to the rated value after the starting period.

## RATINGS

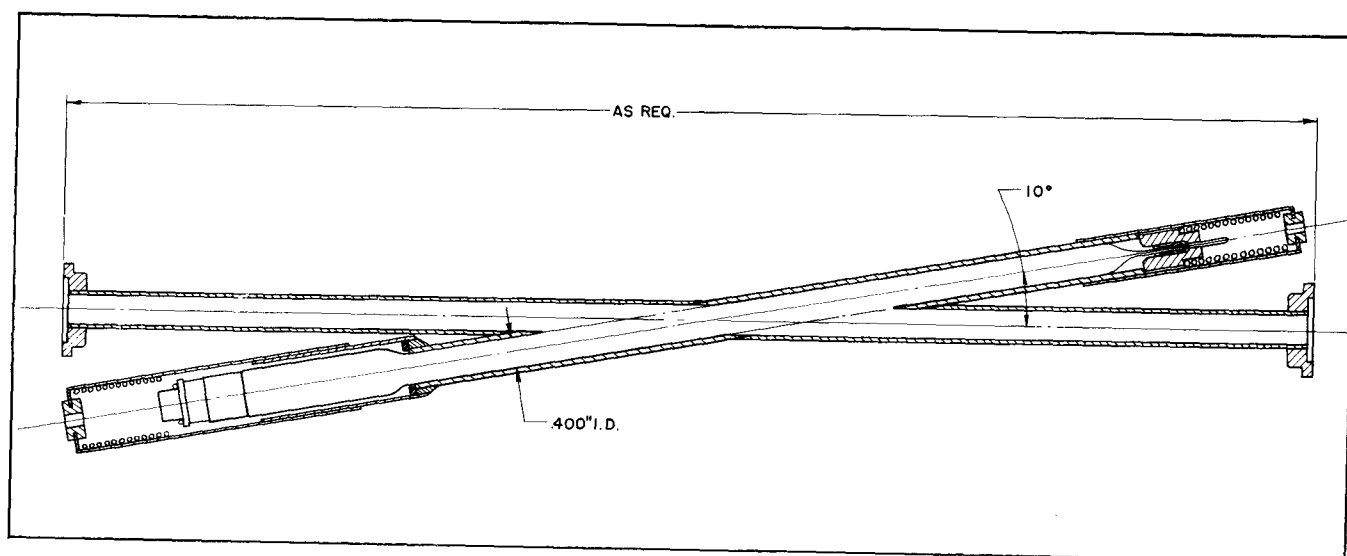
|                          |                                             |
|--------------------------|---------------------------------------------|
| Anode Current .....      | 200 mAdc                                    |
| Filament Voltage .....   | 9-15 Vdc                                    |
| Filament Current .....   | 170 mAdc                                    |
| Tube Dissipation .....   | 23 Watts                                    |
| Tube Voltage Drop.....   | 115 Volts                                   |
| Ambient Temp. Range..... | $-40^\circ\text{F}$ to $+165^\circ\text{F}$ |

\* Trademark

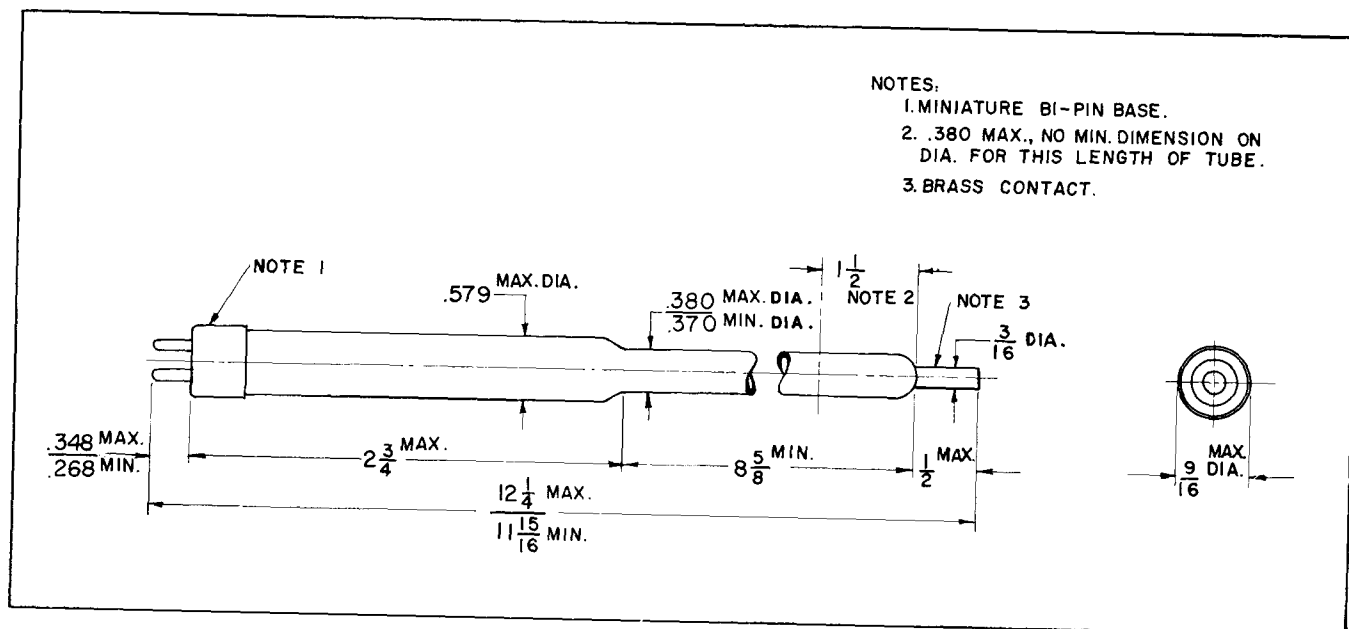
**THE Bendix CORPORATION**  
**Red Bank DIVISION,** EATONTOWN, NEW JERSEY



TYPICAL STARTING AND OPERATING CIRCUIT



WAVEGUIDE MOUNT ASSEMBLY RG-52/U



OUTLINE DRAWING