

DESCRIPTION AND RATING

ION CHAMBER 5978

The 5978 is a high-pressure ion chamber for detecting gamma radiation. A distinctive design feature is the use of a grounded guard ring separated from the two electrodes by ceramic insulators having unusually high electrical resistance over a wide temperature range. The hermetically sealed envelope has ceramic-to-metal seals between the electrodes and insulators.

In operation the signal is taken from the central electrode, and the outer electrode, which is also the outside wall, is at the operating voltage.

TECHNICAL INFORMATION

Electrical Data

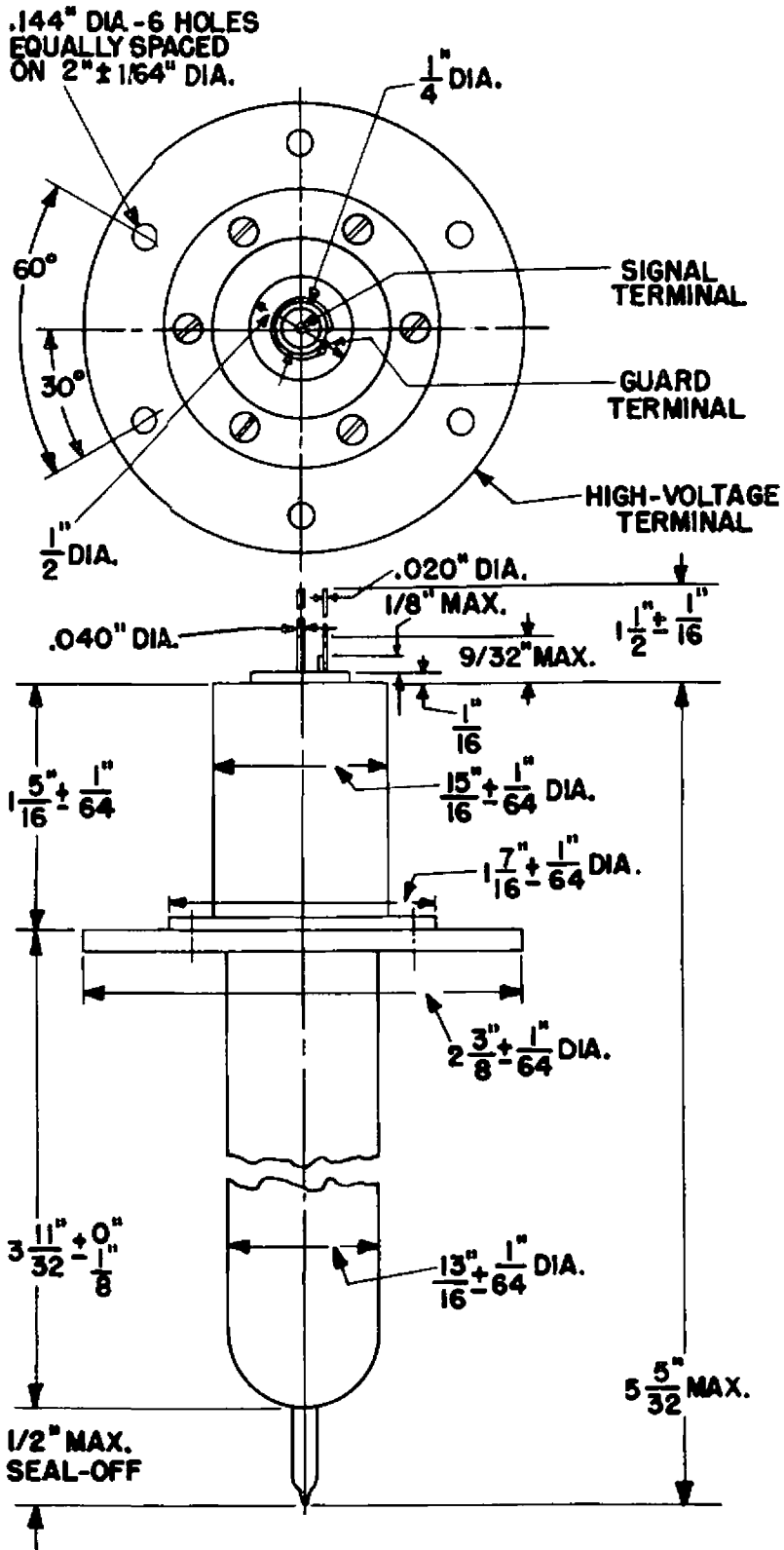
Maximum Voltage	300	Volts
Interelectrode Capacitance	6	µmf
Sensitivity to Gamma Radiation †	1.3×10^{-10}	Amperes per Roentgen per Hour
Insulator Resistance at 25 C	10-15	Ohms

Maximum Ratings

Ambient Temperature	-55 to +100	C
Operating Voltage	300	Volts
Altitude	50,000	Feet
Relative Humidity, operating	35	Percent
Relative Humidity, non-operating	100	Percent

† From source containing radium in equilibrium with its decay products at intensity of 2 roentgens per hour.

from RTMA release #972, May 15, 1951



K-69087-154A140

July 28, 1950

Outline
5978 Ion Chamber

GENERAL ELECTRIC

ELECTRONICS DEPARTMENT, TUBE DIVISIONS
SCHENECTADY, NEW YORK