TRIODE THYRATRON

Triode inert-gas-filled thyatron with negative control characteristic. Primarily designed for industrial control applications.

This data sheet should be read in conjunction with "DEFINITIONS AND OPERATIONAL RECOMMENDATIONS—THYRATRONS" preceding this section of the Handbook.

LIMITING VALUES (absolute ratings, not design centre)

It is important that these limits are never exceeded and such variations as mains fluctuations, component tolerances and switching surges must be taken into consideration in arriving at actual valve operating conditions.

Max. peak anode voltage
  Inverse 1.3 kV
  Forward 650 V

Max. cathode current
  Peak 2.0 A
  Average (max. averaging time 15 secs.) 300 mA
  Surge (fault protection max. duration 0.1 secs.) 15 A

Max. negative control-grid voltage
  Before conduction 125 V
  During conduction 10 V

Max. average positive control-grid current for anode voltage more positive than -10 V (averaging time 1 cycle) 20 mA

Max. peak positive control-grid current during the time that the anode voltage is more negative than -10 V 1.0 mA

Max. control-grid resistor 1.0 MΩ

Max. peak heater-cathode voltage
  Heater/positive 25 V
  Heater negative 100 V

Heater voltage limits 3.7 to 4.3 V

Min. valve heating time 30 s

Ambient temperature limits -75 to +90 °C
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CHARACTERISTICS

Electrical

Heater voltage
4.0 V

Heater current at 4.0 V
  Average
  1.45 A
  Maximum
  1.6 A

Anode to control-grid capacitance
3.3 μF

Control-grid to cathode capacitance
4.5 μF

Deionisation time (approx.)
500 μs

Anode voltage drop (approx.)
9 V

Control ratio
28

Mechanical

Type of cooling
Convection

Mounting position
Any

Max. net weight

\[ \begin{align*}
  & 1.4 \text{ oz} \\
  & 40 \text{ g}
\end{align*} \]
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CONTROL CHARACTERISTIC
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GRID ION CURRENT CHARACTERISTIC