7590
HYDROGEN THYRATRON TUBE

The Type 7590 is a three element unipotential cathode hydrogen thyratron designed for "crow-bar" service. This tube is equipped with a hydrogen reservoir for maximum dependability.

GENERAL CHARACTERISTICS

Electrical	Nom.	Min.	Max.	
Heater Voltage	6.3	6.0	6.6	Volts AC
Heater Current (at 6.3 volts)		12.0	22.0	Amperes
Reservoir Voltage (Note 1)		2.5	5.5	Volts
* Reservoir Current at 4.5 Volts		2.0	5.0	Amperes
Minimum Heating Time			3	Minutes

Mechanical		
Mounting Position		Any
Base		See Outline
Cooling (Note 2)		
Net Weight	1.5	Pounds
Dimensions		Per Outline

MAXIMUM RATINGS

Max. Peak Anode Voltage, Forward, Transient (Note 3)	30.0	Kilovolts
Max. Peak Anode Voltage, Forward, Operating	25.0	Kilovolts
Max. Peak Anode Voltage, Inverse	15.0	Kilovolts
Min. Anode Supply Voltage	10.0	Kilovolts DC
Max. Peak Anode Current	1000	Amperes
* Max. Average Anode Current (Note 4)	500	Milliamperes
Averaging Time	10	Seconds
Max. Discharge Time (Note 4)	0.1	Seconds
Max. Anode Current Rate of Rise	2500	Amps / u sec.
* Peak Trigger Voltage (Note 5)		
Max. Anode Delay Time	1.0	Microseconds
Ambient Temperature	-55° to $+75^{\circ}$	

Note 1:

Adjust reservoir voltage to value indicated on tube within ±5%.

Note 2:

No cooling required.

Note 3:

The maximum peak forward transient anode voltage rating applies to a transient voltage condition wherein the duration of the transient does not exceed two seconds.

Note 4:

The allowable time of discharge varies with the current as shown
Filter Discharge Period 0 - 1.5 ms.

Rectifier Short Circuit Period	1.5 - 100 ms	25 a
Rectifier Short Circuit Period	1.5 - 50 ms	50 a
Rectifier Short Circuit Period	1.5 - 30 ms	85 a

Time will be measured from the initiation of the discharge.

* Indicates change from data sheet dated 6-61

* Note 5:

The driver pulse measured at the tube socket with the thyratron grid disconnected shall be: egy = 550 Volts minimum, 2500 Volts maximum; Rate of Rise 1800 Volts per Microsecond; tp = 2.0 Microseconds minimum; Impedance of Driver Circuit 50 - 200 Ohms.

Additional information for specific applications can be obtained from the

Electron Tube Applications Section
ITT Electron Tube Division
P. O. Box 100
Easton, Pennsylvania

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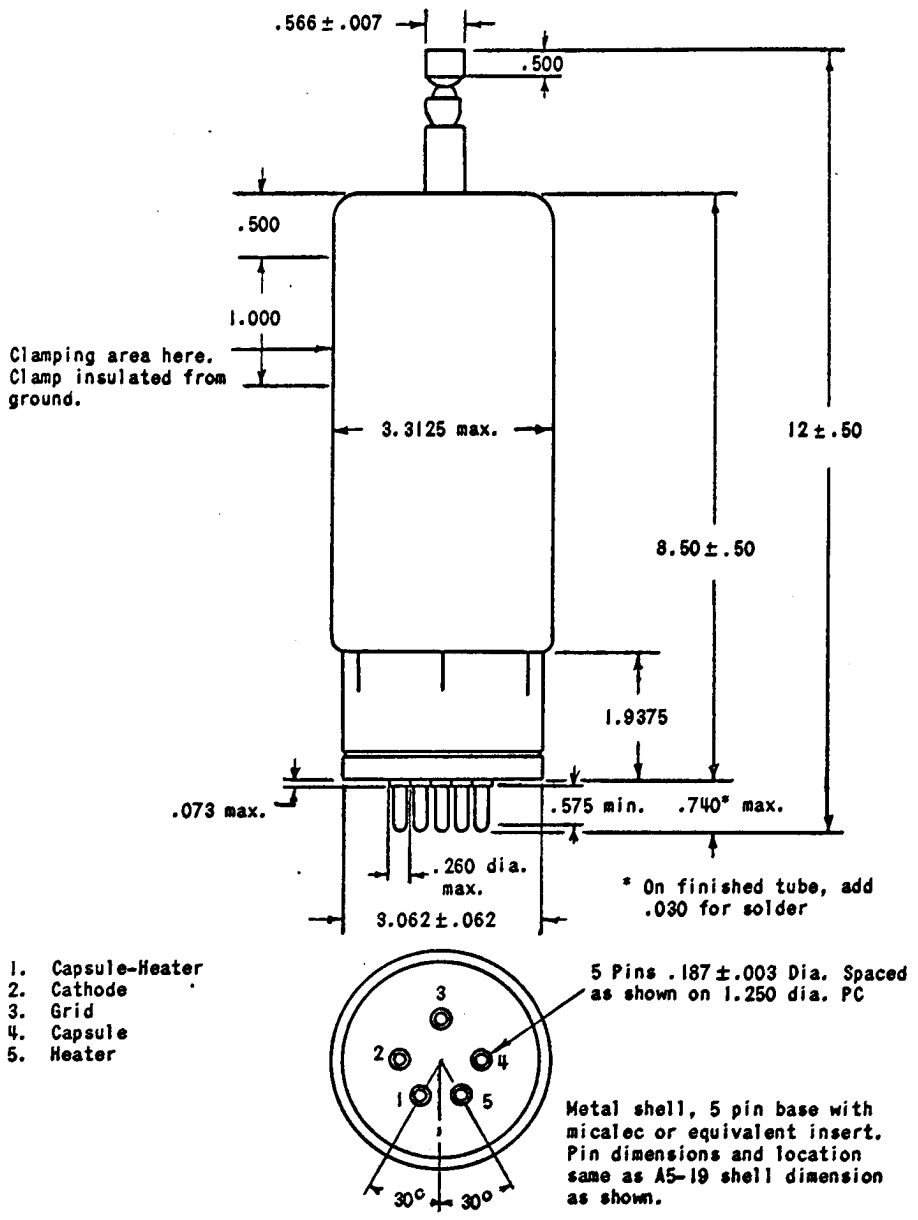

OUTLINE 7590