GD1159 Thyratron Specification

Anode Characteristics

Peak Forward Anode Voltage:	33kV max [1]
Peak Reverse Anode Voltage:	33kV max [2]
Peak Forward Anode Current:	1000A
Average Anode Current:	
Continuous operation:	1.25A max
Intermittent operation:	2.2 A max
Anode Current Rate of Rise:	5kA/μs [3]

Grid 2 Drive

Unloaded Drive Pulse Voltage:	500V~1000V
Driver Circuit Output Impedance:	50Ω~ 500Ω
Rate of rise of grid 2 pulse:	1kV/μs min [3]
Driver Pulse Duration:	1 μs min
Loaded Grid 2 Bias Voltage:	0 V~ -150 V
Grid 2 Pulse Delay:	0.5μs ~ 3μs
Peak Inverse Grid 2 Voltage:	450V max

Grid 1 Pulse Drive

Unload Grid 1 Drive Pulse Voltage:	300V ~ 1000V [4]
Peak Grid 1 Drive Current:	0.3A~ 1A [5]
Grid 1 Pulse Duration:	2us min
Rate of Rise of Grid 1 Pulse：	1kV/us min [3]
Peak Inverse Grid 1 Voltage:	450V max

Grid 1 DC Drive

DC Grid 1Unloaded Priming Voltage:	75V~ 150V
DC Grid 1 Priming Current:	50mA ~ 100 mA

Electrical

Cathode Heater Voltage:	6.3±5%V
Cathode Heater Current (6.3V):	20A~25A
Preheating Time:	10 min.

Mechanical

Outline and Dimension:	See outline drawing
Net weight:	About 1500g
Mounting Position:	Pin [6]
Cooling Way:	Natural or forced-air cooling [7]

Characteristics

Critical anode voltage for conduction:	2.0 kV max
Anode Delay Time:	250ns max [8]
Anode Delay Time Drift:	50ns max [9]
Time Jitter:	5ns max

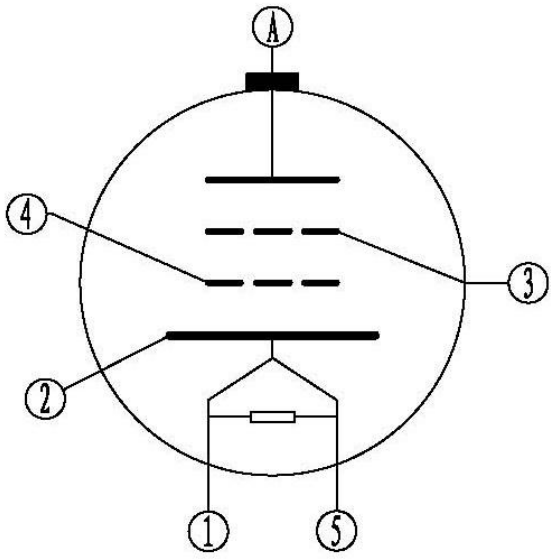
Environmental

Ambient Temperature:	-50℃ ~ +90℃
Altitude:	3km

Notes

[1] It is the maximum peak voltage under the condition of resonant charging.
[2] Peak inverse anode voltage (include peak) must not exceed 10KV within 25 μs after impulse current discharge finished, otherwise it will damage the grid and cause spark inside the tube and shorten the working life.
[3] This rate of rise refers to that part of the leading edge of the pulse between 26% and 70% of the pulse amplitude.
[4] Measured with respect to cathode. Pre-pulsing of grid 1 is recommended for high rate of rise of current applications.
[5] The higher grid 1 is pulsed, the larger must the grid 2 negative bias be, to prevent the tube firing on the grid 1 pulse.
[6] The tube must be fitted using its corresponding 5-pin board.
[7] If the tube is cooled by forced-air, an air flow of at least 2.83 m^3/min is required.
[8] The time interval between the instant at which the rising unloaded grid 2 pulse reaches 26% of its pulse amplitude and the instant when anode conduction takes place.
[9] Anode firing delay time drift, the drift in delay time over a period from 10 seconds to 10 minutes after reaching full voltage, its anode firing delays time of change.

Electrodes Connection Schematic Diagram



Pin	Electrode
1	Heater
2	Cathode
3	Grid 2
4	Grid 1
5	Heater
A	Anode

Outline Drawing