

GL-6808

THYRATRON

TRIODE TYPE

QUICK-HEATING CATHODE

DESCRIPTION AND RATING

The GL-6808 is a three-electrode, inert-gas-filled thyatron with a negative control characteristic for all control applications. This tube combines the desirable temperature characteristic of gas tubes, maximum ratings over a wide temperature range, with the long life of mercury tubes. Another feature useful in industrial applications is the quick-heating cathode which requires only one minute to reach operating temperature.

The GL-6808 is equipped with a bracket-type base for panel mounting.

TECHNICAL INFORMATION

GENERAL

Electrical	Minimum	Bogey	Maximum	
Cathode* - Filamentary				
Filament Voltage	2.37	2.5	2.63	Volts
Filament Current at 2.5 Volts	---	21	23	Amperes
Heating Time	60	---	---	Seconds
Anode to Control-Grid				
Capacitance	---	10	---	μ f
Control-Grid to Cathode				
Capacitance	---	10	---	μ f
Deionization Time, approximate				
$E_c = -250$ volts	---	100	---	Microseconds
$E_c = -12$ volts	---	700	---	Microseconds
Ionization Time, approximate	---	10	---	Microseconds
Anode Voltage Drop	---	16	---	Volts
Critical Grid Current, $E_p = 200$				
volts a-c.	---	---	10	Microamperes
Control Characteristics				
Anode Voltage 60 100 1000				Volts
Grid Voltage +6 0 -7				Volts

Mechanical

Type of Cooling - Convection

Mounting Position - Any

Net Weight, maximum 12 Ounces

The anode and grid-circuit returns should be made to the center tap of the filament transformer.

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MAXIMUM RATINGS, Absolute Values

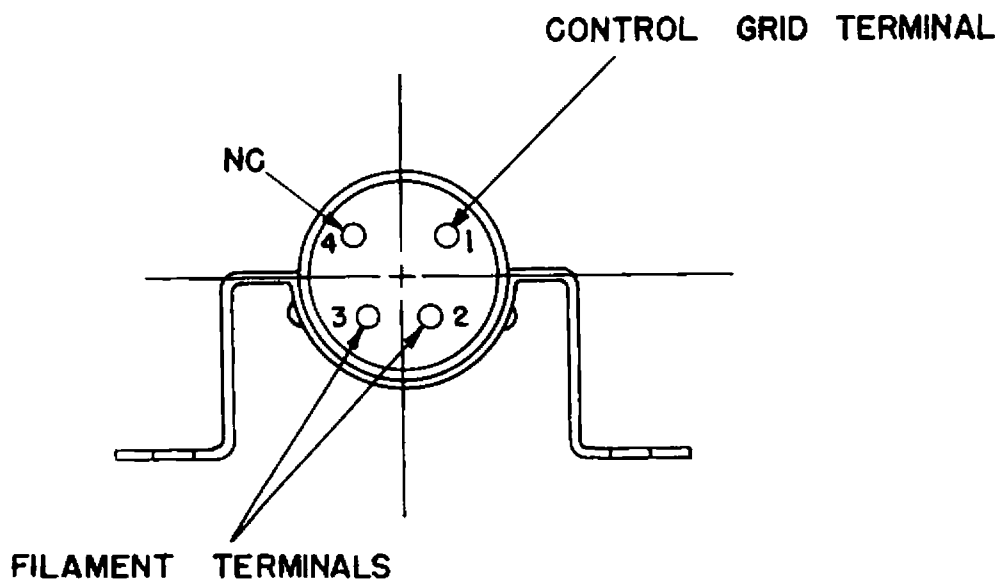
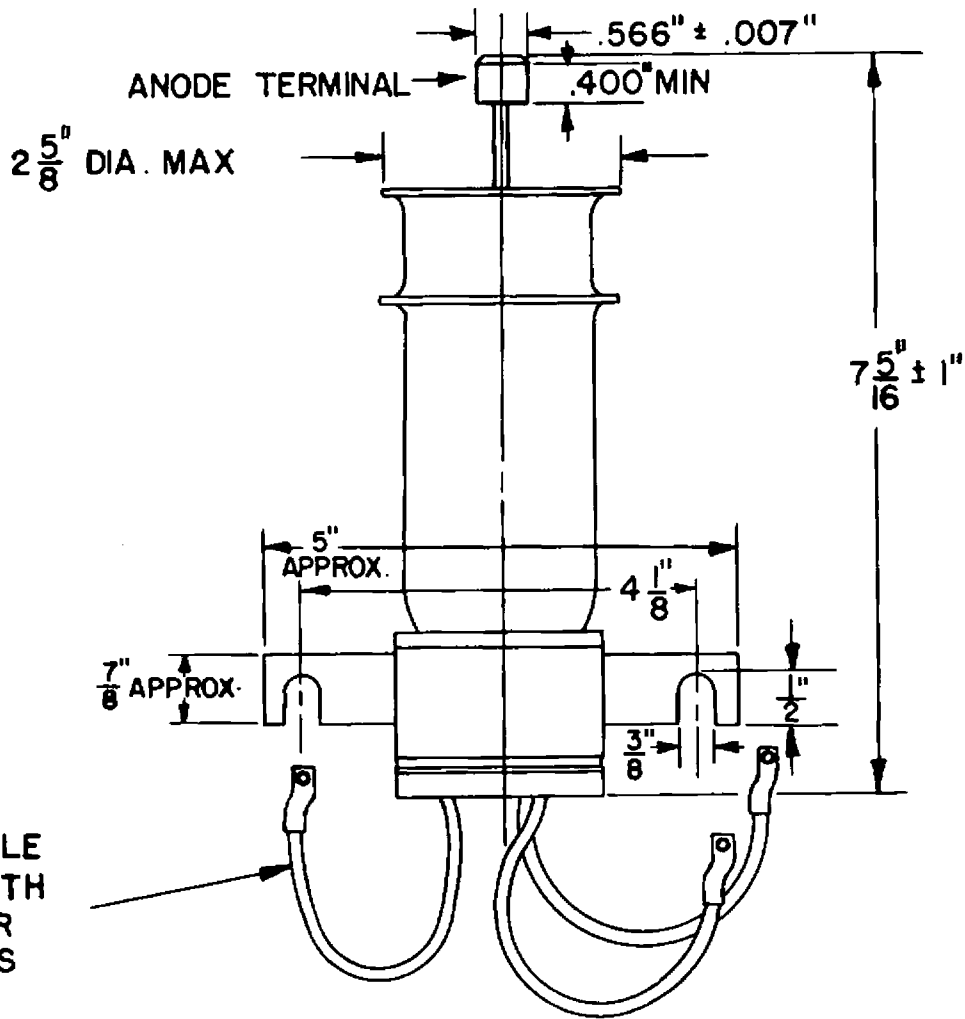
Maximum Peak Anode Voltage		
Inverse.	1500	Volts
Forward.	1500	Volts
Maximum Cathode Current		
Peak	80	Amperes
Average.	6.4	Amperes
Maximum Averaging Time	15	Seconds
Fault.	1120	Amperes
Maximum Duration	0.1	Seconds
Maximum Negative Control-Grid Voltage		
Before Conduction.	250	Volts
During Conduction.	10	Volts
Maximum Positive Control-Grid Current		
Anode Positive	0.20	Amperes
Anode Negative	0.10	Amperes
Commutation Factor λ	130	
Ambient Temperature Limits	-55 to +70	C

Most satisfactory performance and life will result with quadrature filament operation, i.e., with the filament voltage 90 degrees out of phase with the anode voltage. When quadrature operation is used the voltage on the filament lead (lead No. 2) adjacent to the grid lead (lead No. 1) should be crossing zero from positive toward negative when the anode voltage is at the peak of the positive half cycle.

In three-phase systems each tube should be connected so that its anode and filament voltages approximate as nearly as possible the quadrature phasing, i.e., filament voltage 90 plus or minus 30 degrees out of phase with the anode voltage.

When quadrature operation is not practicable, filament lead No. 2 should be negative when the anode is positive.

λ Commutation factor is the product of the rate of current decay in amperes-per-microsecond just prior to commutation, and the rate of inverse voltage rise in volts-per-microsecond just after commutation.



OUTLINE
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