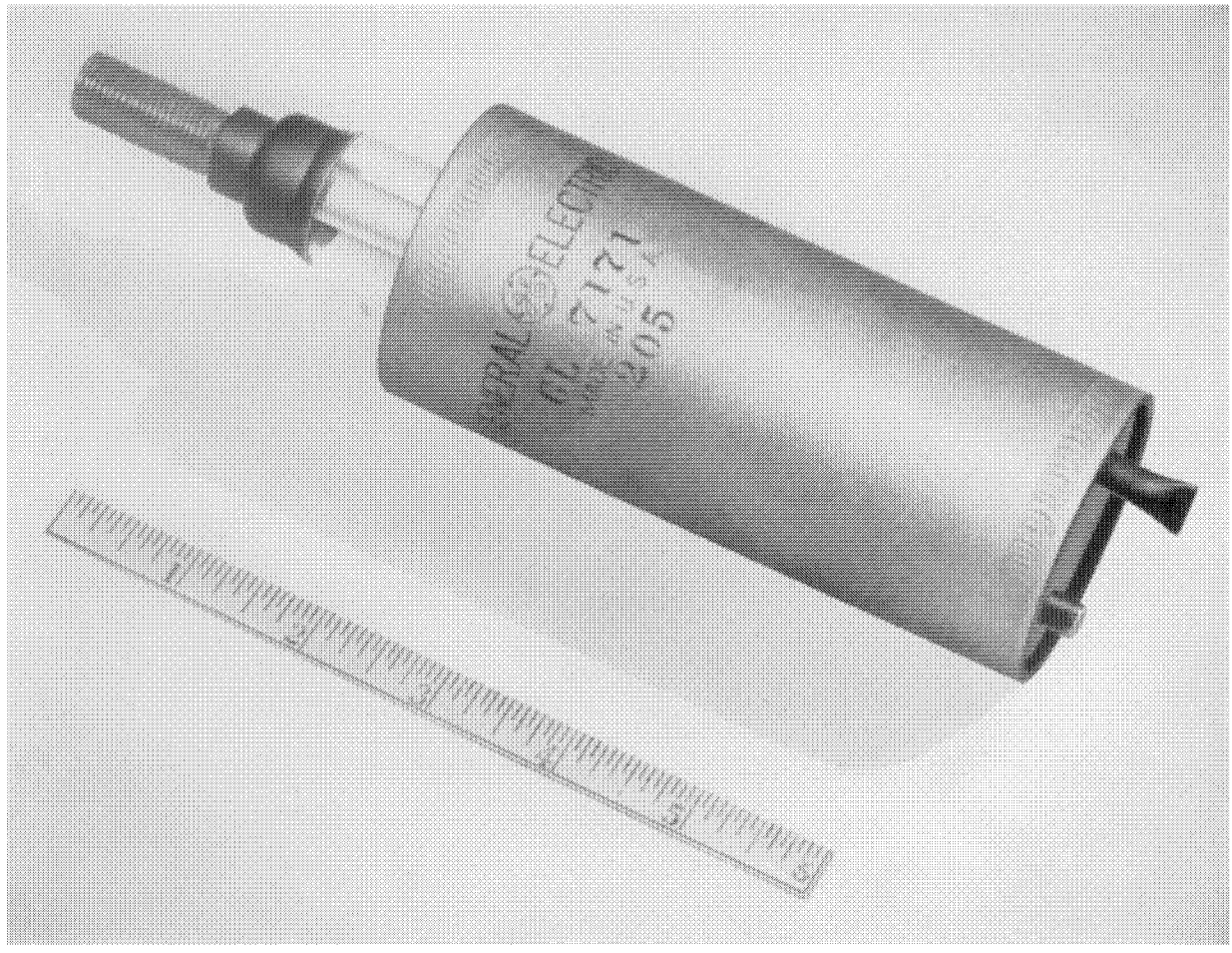


IGNITRON

CAPACITOR-DISCHARGE SERVICE **DC SHORT-CIRCUITING-SWITCH SERVICE**
35,000 AMPERES PEAK

The GL-7171 is a sealed, stainless-steel jacketed ignitron for use as a switch in capacitor-discharge circuits operating up to 10,000 volts. In this service the tube will carry peak currents up to 35,000 amperes.

GENERAL

Electrical

Cathode Excitation—Cyclic		
Cathode Spot Starting—Ignitor		
Number of Electrodes		
Main Anodes	1	
Main Cathodes	1	
Ignitors	1	
Arc Drop		
At 4000 Amperes	20	Volts
At 30,000 Amperes	55	Volts
Peak Inverse Voltage, maximum	10,000	Volts

Mechanical

Envelope Material—Stainless Steel		
Mounting Position—Axis Vertical, Anode Lead Up		
Net Weight	2	Pounds

Thermal

Type of Cooling—Convection		
Ambient Temperature, minimum	25	C
Cathode Temperature, maximum	35	C
Anode-Header Temperature, maximum*	55	C

GENERAL ELECTRIC

Supersedes ET-T1512 dated 12-58

MAXIMUM RATINGS AND TYPICAL OPERATION

Capacitor-Discharge Service, Pulse Duty, Sinusoidal Current

Peak Anode Voltage		
Forward	10,000	Volts
Inverse	10,000	Volts
Critical Anode Starting Voltage, minimum	100	Volts
Anode Current (See Curve K-69087-72A858 for Details)		
Peak†	35,000	Amperes
Average	0.1	Amperes
Maximum Averaging Time	1	Cycle
Fault	35,000	Amperes
Maximum Duration	0.002	Seconds
Rate of Rise of Current		
Maximum	5600	Amperes per Microsecond
Minimum	1400	Amperes per Microsecond
Frequency of Current Conduction Periods, maximum	1	Per Minute
Ionization Time	0.5	Microseconds

DC Short-Circuiting-Switch Service

Peak Anode Voltage		
Forward	10,000	Volts
Inverse	10,000	Volts
Critical Anode Starting Voltage, minimum	100	Volts
Anode Current (See Curve K-69087-72A858 for Details)		
Peak‡	35,000	Amperes
Average	0.25	Amperes
Maximum Averaging Time	1	Cycle
Fault	35,000	Amperes
Maximum Duration	0.002	Seconds
Rate of Rise of Current		
Maximum	5600	Amperes per Microsecond
Minimum	1400	Amperes per Microsecond
Frequency of Current Conduction Periods, maximum	1	Per Minute
Ionization Time	0.5	Microseconds

Ignitor Ratings	**Minimum**	**Maximum**	
Separate Excitation			
Ignitor Voltage			
Forward Open Circuit	1500	3000	Volts
Inverse, maximum	—	5	Volts
Ignitor Current Short Circuit	200	250	Amperes
Length of Firing Pulse, sine wave	5	10	Microseconds
Anode Firing			
Ignitor Voltage			
Forward, maximum		3000	Volts
Inverse, maximum		5	Volts
Peak Ignitor Current	200	250	Amperes

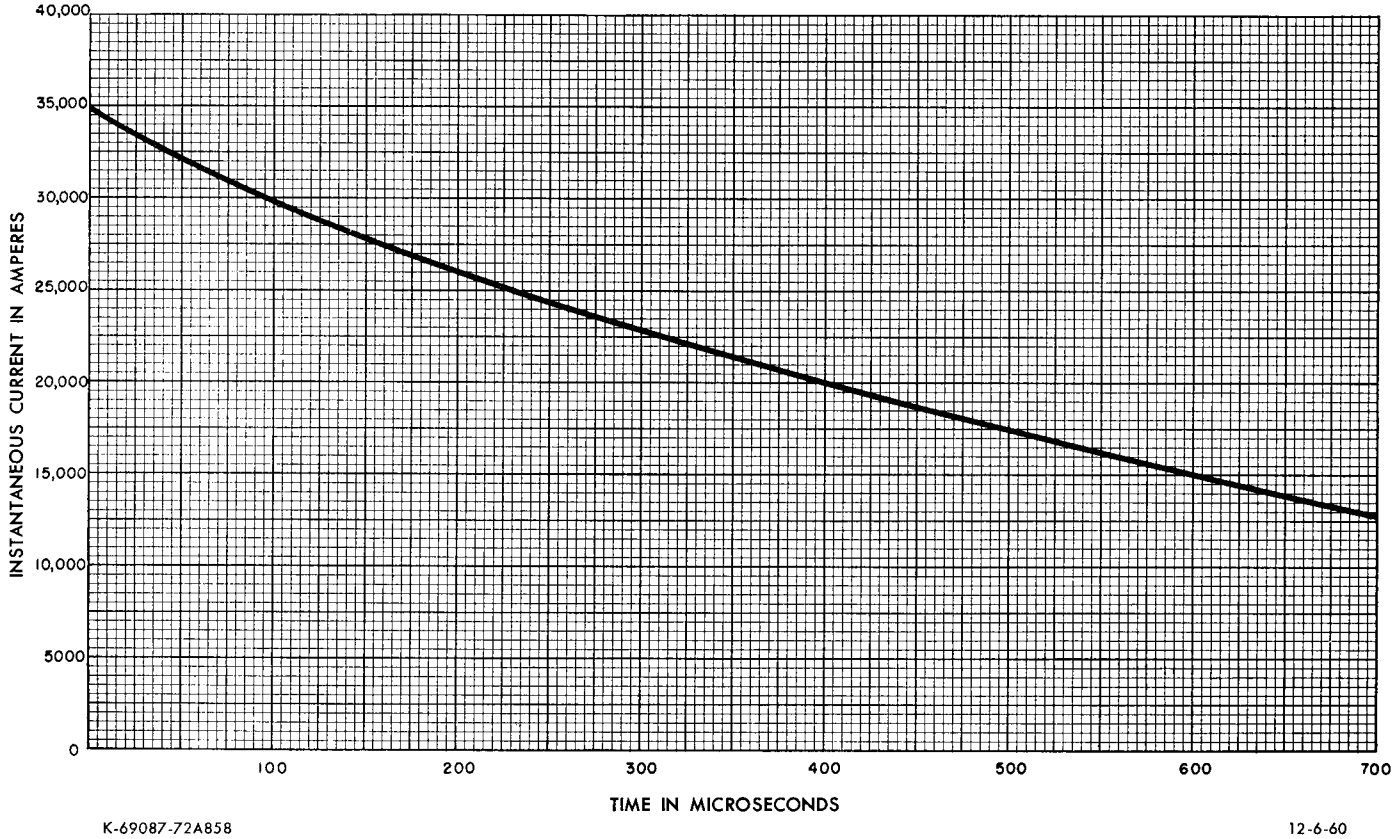
*To prevent mercury condensation, the anode-header temperature should be higher than the cathode temperature at all times. Mercury must be kept away from the anode and anode seals. Before tube operation, the anode seals must be warmed, with respect to the cathode, long enough to vaporize all mercury from the seal area.

†Dampened oscillations are permissible provided the dampening coefficient is less than the value shown on the current-waveform curve. The peak of the oscillation must not exceed 48,000 amperes.

‡Tube must be operated within the area specified on the current-waveform curve.

CURRENT-WAVEFORM CURVE

MAXIMUM PERMISSIBLE CURRENT



K-69087-72A858

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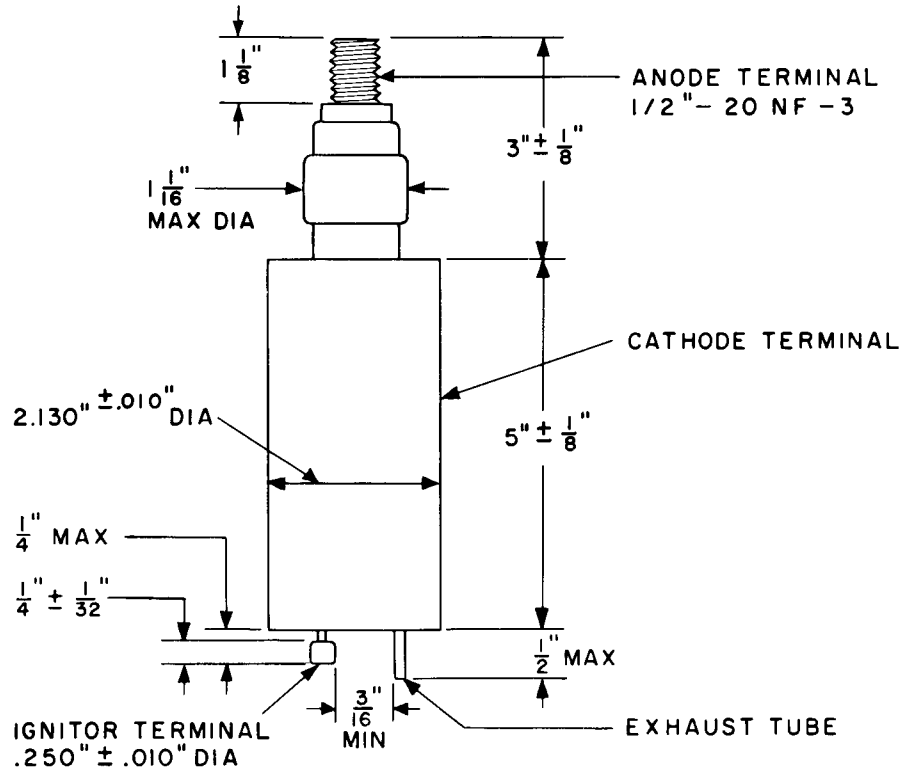
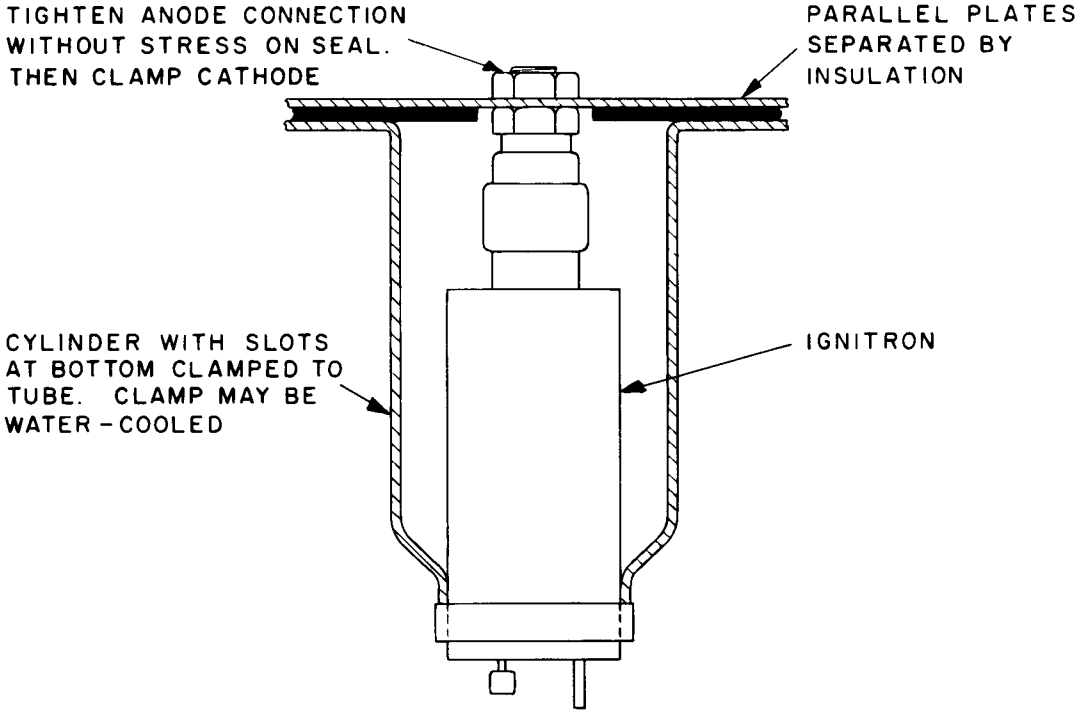


COAXIAL MOUNTING



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GENERAL ELECTRIC

POWER TUBE DEPARTMENT
Schenectady 5, N. Y.