

ELECTRON TUBE DIVISION
P.O. Box 100
Easton, Pennsylvania 18042
Telephone 215 252-7331

7003A

POWER TRIODE

Description:

The 7003A is a ruggedized shielded-grid triode for use as a switch tube. In switch tube service the tube can deliver a peak pulse power output of 2.5 megawatts. The anode is forced air-cooled and capable of dissipating 3 Kilowatts. The cathode is a unipotential oxide-coated type.

Electrical:

Heater Voltage	6.0 volts
Heater Current	60 Amperes (Nominal)
Maximum Heater Starting Current	300 Amperes
Minimum Cathode Warm-Up Time	15 minutes
Amplification Factor	200
Interelectrode Capacitance	
Grid-Plate	1.6 pF
Grid-Cathode	230 pF
Plate-Cathode	25 pF

Mechanical:

Mounting Position	Any
Type of Cooling	Forced Air
Maximum Incoming Air Temperature	75°C
Minimum Air Flow on Anode for 3KW dissipation	-200 cfm @ .3" water
Maximum Glass Temperature	175°C
Net Weight, Approximate	27 pounds

Maximum Rating and Typical Operating Conditions:

Pulse Modulator or Pulse Amplifier

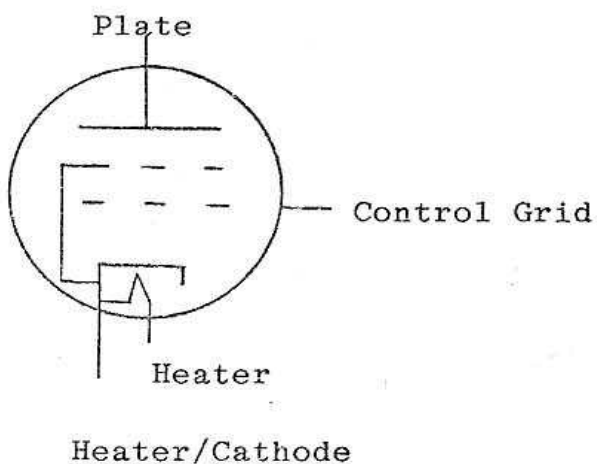
Maximum Rating, Absolute Values

DC Plate Voltage	45,000 Volts
DC Grid Voltage	-600 Volts
DC Plate Current	0.6 Amperes
Peak Cathode Current	90 Amperes
Plate Dissipation	3,000 Watts
Pulse Duration	10 microseconds
Duty Factor	0.03

+ Heater voltage for pulse cathode current greater than 60 amperes is a minimum of 6.3 Volts.

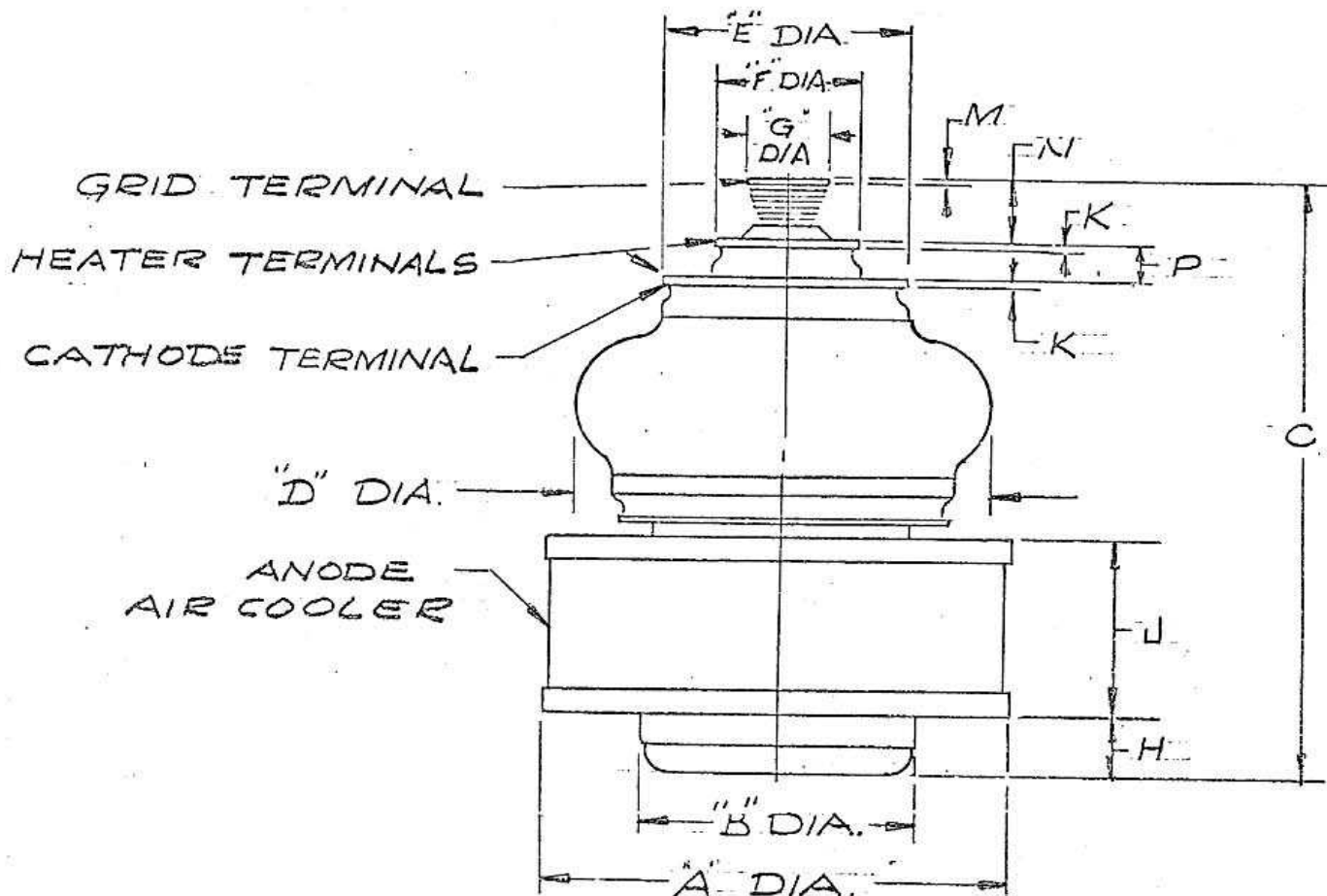
Typical Operation

DC Plate Voltage	35,000	45,000 Volts
DC Grid Voltage	-300	-350 Volts
Pulse Positive Grid Voltage	800	1,300 Volts
Pulse Driving Power	3,300	6,600 Volts
Pulse Power Output	1.2	2.5 Mwatts
Duty Factor	.006	.003



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Ltr	Dimensions in inches with metric equivalents (mm) in parentheses			
	Minimum		Maximum	
Quality Conformance Inspection, Part 2				
A	7.95	(201.93)	8.05	(204.47)
B	4.44	(112.78)	4.56	(115.82)
C			11.63	(295.40)
D			7.13	(181.10)
E	4.047	(102.79)	4.078	(103.58)
F	2.422	(61.52)	2.453	(62.31)
G	1.370	(34.80)	1.380	(35.05)
H	1.07	(27.18)	1.19	(30.23)
J	3.19	(81.03)	3.31	(84.07)
K	.150	(3.81)		
M	.100	(2.54)		
N	.97	(24.64)	1.09	(27.69)
P	.63	(16.00)	.75	(19.05)

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