

DATA FOR E.I.A. REGISTRATION

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THREE ELECTRODE THYRATRON XR1-3200A

The XR1-3200A is a three electrode inert gas-filled thyatron with a negative control characteristic. This tube is designed primarily for motor control applications.

MAXIMUM RATINGS

Maximum Peak Anode Voltage			
Inverse	1500		volts
Forward	1500		volts
Maximum Cathode Current			
Peak	40		amperes
Average	3.2		amperes
Surge (maximum duration 0.1 second)	560		amperes
Maximum Averaging Time	15		seconds
Maximum Negative Control Grid Voltage			
Before Conduction	250		volts
During Conduction	10		volts
Maximum Positive Control Grid Current (during the time that the anode voltage is more positive than -10 volts)			
Peak	2.5		amperes
Average (Averaging Time One Cycle)	0.20		ampere
Maximum Positive Control Grid Current (during the time that the anode voltage is more negative than -10 volts)			
Peak	25		milliamperes
Maximum Control Grid Resistor	100,000		ohms
Maximum Commutation Factor	130		
Ambient Temperature Limits	-55 to +70		°C

GENERAL

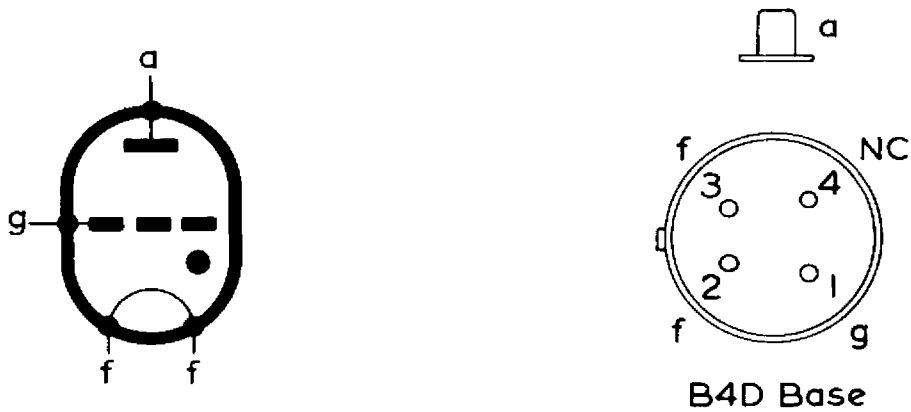
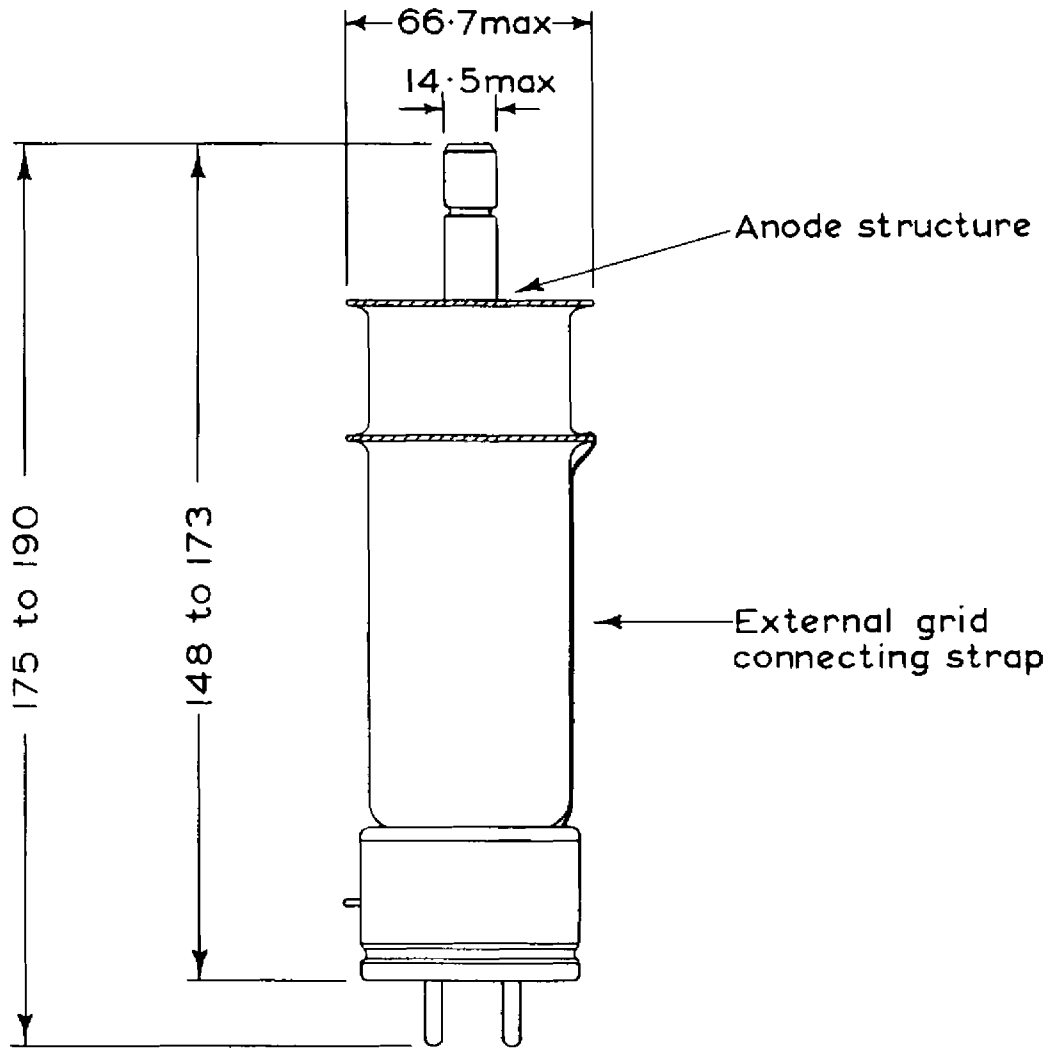
	Minimum	Bogey	Maximum	
Electrical Data				
Filament Voltage	2.37	2.5	2.63	volts
Filament Current at 2.5 volts		12	13.5	amperes
Cathode Heating Time	60.0			seconds
Anode to Control Grid Capacitance			7.5	µf
Control Grid to Cathode Capacitance			5.0	µf
Deionisation Time				
Grid Voltage = -250volts			40 approx.	µseconds
Grid Voltage = -12 volts			400 approx.	µseconds
Ionisation Time			10 approx.	µseconds
Anode Voltage Drop			16 approx.	volts
Critical Control Grid Current at Anode Voltage = 1500 Volts		<20		µamperes

Mechanical Data

* Mounting Position	Any between horizontal and vertical with base down
** Cooling	Convection
Maximum Net Weight	10.6 ounces

*Care should be taken to avoid damage to or contact with the external grid connecting strap.

**The anode structure must be left free to ensure adequate cooling by free convection.



All dimensions in mm

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XRI-3200A

JEDEC TYPE NO. 7981

I_g
(mA)

+25

0

-50

-100

-150

-200

$I_d = 0.3A$

0.8A

1.6A

2.4A

3.2A

4.0A

V_g (V) -12

-8

-4

0

