

TRIODE THYRATRON

Triode, inert gas-filled thyatron with negative control characteristic. Primarily designed for motor control applications.

XRI-3200A

PRELIMINARY DATA

This data sheet should be read in conjunction with "DEFINITIONS AND OPERATIONAL RECOMMENDATIONS—THYRATRONs" which precede this section of the handbook.

LIMITING VALUES (absolute ratings, not design centre)

It is important that these limits are never exceeded and such variations as mains fluctuations, component tolerances and switching surges must be taken into consideration in arriving at actual valve operating conditions.

Max. peak anode voltage		
Inverse	1.5	kV
Forward	1.5	kV
Max. cathode current		
Peak	40	A
Average (max. averaging time 15 s)	3.2	A
Surge (fault protection max. duration 0.1 s)	560	A
Max. negative grid voltage		
Before conduction	250	V
During conduction	10	V
Max. average positive grid current for anode voltage more positive than -10V (averaging time 1 cycle)	200	mA
Max. peak positive grid current during the time that the anode voltage is more positive than -10V	2.5	A
Max. peak positive grid current during the time that the anode voltage is more negative than -10V	25	mA
Max. grid resistor	100	k Ω
Filament voltage limits	2.37 to 2.63	V
Min. valve heating time	60	s
Max. commutation factor	130	
Ambient temperature limits	-55 to +70	$^{\circ}$ C

CHARACTERISTICS

Electrical

Filament voltage	2.5	V
Filament current at 2.5V		
Average	12	A
Maximum	13.5	A
Anode to grid capacitance	7.5	pF
Grid to cathode capacitance	5	pF
Deionisation time (approx.)		
(a) $V_g = -250V$	40	μ s
(b) $V_g = -12V$	400	μ s
Ionisation time (approx.)	10	μ s
Anode voltage drop (approx.)	16	V
Critical grid current at $V_a = 1.5kV$	<20	μ A

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Mechanical

Type of cooling
Mounting position

Convection

Any position between horizontal and vertical with base downwards
The anode structure must be left free to ensure adequate cooling by free convection.

Max. net weight

{ 10.6 oz
305 g

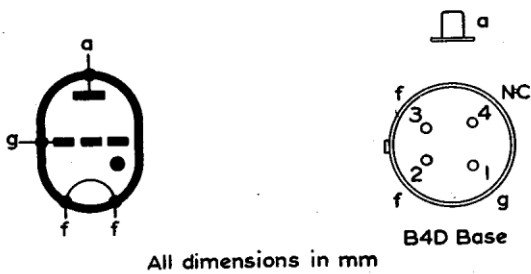
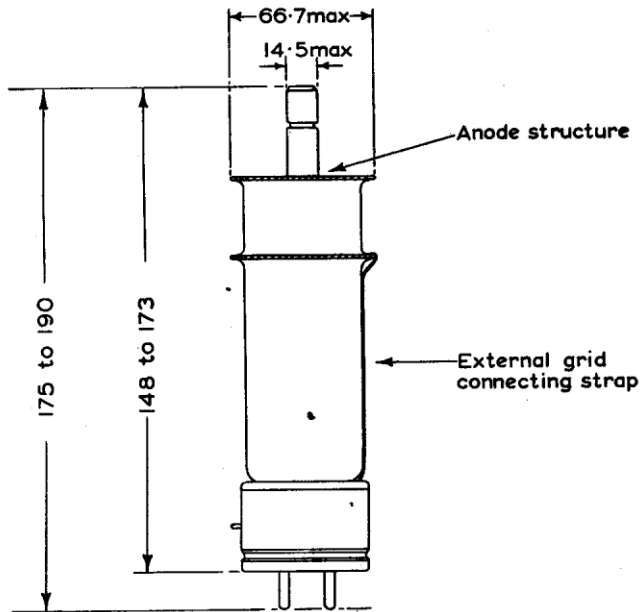
Weight of valve in carton

{ 1 lb 11 oz
780 g

Dimensions of packing

{ 5.5 × 5.5 × 12 in.
135 × 135 × 294 mm





All dimensions in mm

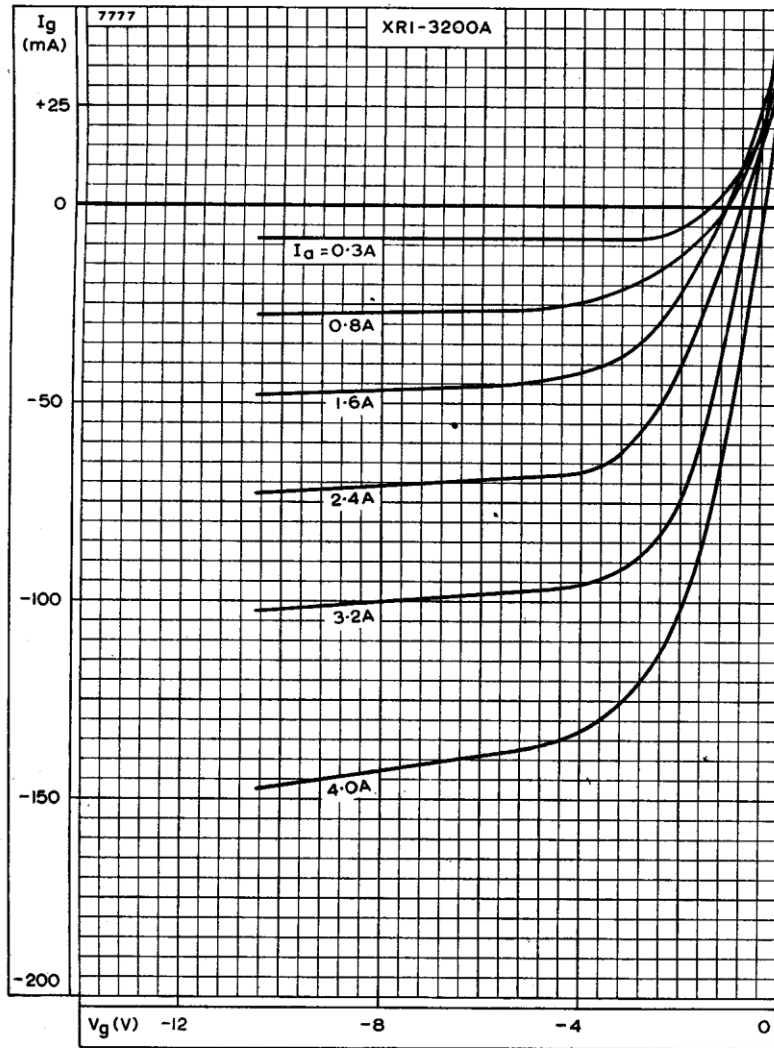
The anode structure must be left free to ensure adequate cooling by free convection.

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

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GRID ION CURRENT CHARACTERISTICS

