TRIODE THYRATRON

6.4A inert gas-filled triode thyratron with negative control characteristic. Primarily designed for motor control applications.

XR1-6400

(5545)

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	80	A
Average (max. averaging time 15s)	6.4	A
Surge (fault protection max. duration 0.1s)	1120	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 (Recommended min. grid resistor 500Ω)	100	kΩ
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	°C

CHARACTERISTICS

Electrical

Filament voltage	2.5	V
Filament current at 2.5V		
Average	21	A
Maximum	23	A
Anode to control-grid capacitance	0.8	pF
Control-grid to cathode capacitance	45	pF
Deionisation time (approx.)		
(a) V_g=−250V	50	μs
(b) V_g=−12V	500	μs
Ionisation time (approx.)	10	μs
Anode voltage drop (approx.)	16	V
Critical grid current at V_a=1.5 kV	<20	μA

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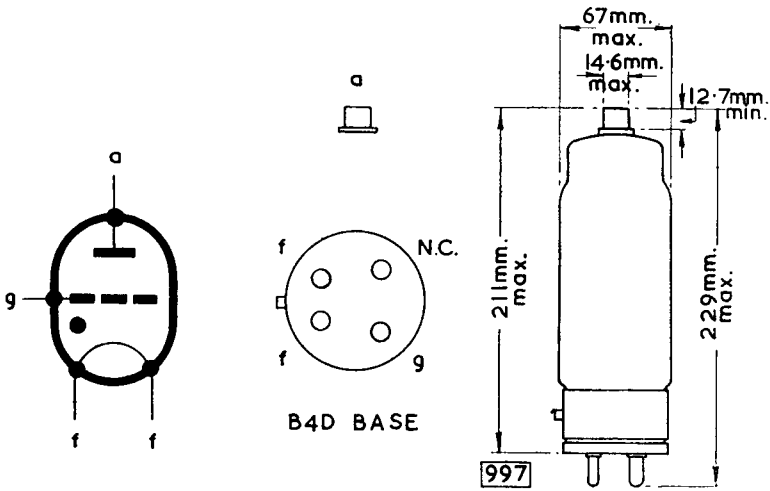
Mechanical

Type of cooling	Convection
Mounting position	Any position between horizontal and vertical with base downwards
Max. net weight	{ 12 oz. / 340 g



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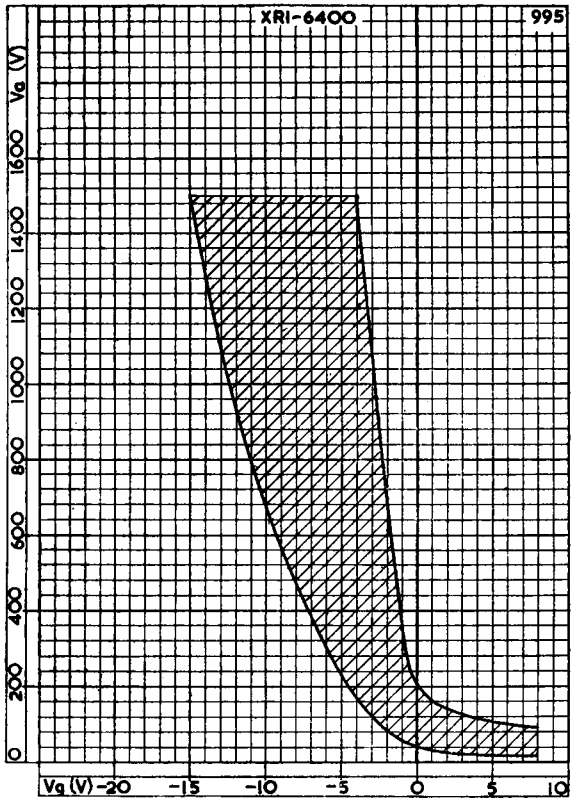

CONTROL CHARACTERISTIC

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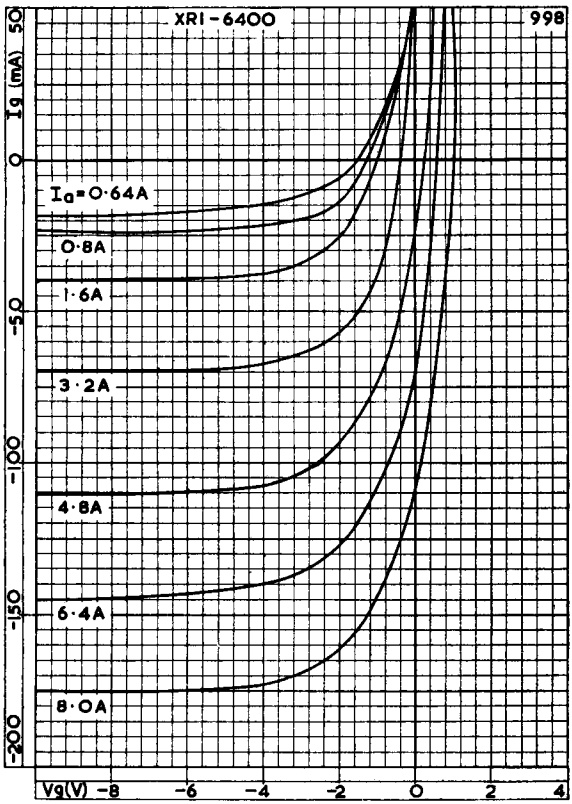

GRID ION CURRENT CHARACTERISTICS