TRIODE THYRATRON

Triode, hydrogen-filled thyratron primarily designed for pulse operation at high repetition frequencies, high peak currents and high voltages.

XH3-045

(3C45)

PRELIMINARY DATA

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 pulse anode voltage (pulse modulator service).		←
*Inverse	3.0	kV
†Forward	3.0	kV
Min. anode supply voltage	800	V
Min. peak inverse voltage	5.0	% of forward anode voltage
Max. cathode current		
Peak	35	A
Average	45	mA
Averaging time	1.0	cycle
Max. negative control-grid voltage	200	V
Control-grid drive limits (measured with grid disconnected)		
Min. peak grid voltage	175	V
Max. time of rise	0.5	μs
Min. grid pulse duration	2.0	μs
Max. impedance of drive circuit	1.5	kΩ
Max. pulse repetition frequency	See Note ‡	
Heater voltage limits	5.7 to 6.6	V
Min. valve heating time	120	s
Ambient temperature limits	−50 to +90	°C

*In pulsed operation, the peak inverse anode voltage should not exceed 1.5 kV during the first 25μs after the pulse.

†For instantaneous starting applications where the anode voltage is applied instantaneously the maximum initial permissible forward voltage is 3.0 kV and shall not be obtained in less than 0.04 seconds.

‡The product of pulse repetition frequency, peak forward anode voltage and peak cathode current must be not greater than 0.3×10^9.

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CHARACTERISTICS

Electrical

Heater voltage	6.3	V
Heater current		
Minimum	2.0	A
Maximum	2.5	A

Mechanical

Type of cooling	Convection
Mounting position	Any

Clamping at base and/or bulb only in the region up to 2 inches above the top of the base.