L-4945A Thyratron

High-voltage switch ideally suited for crowbar applications

The L-4945A is a ceramic-metal, double-gap, tetrode deuterium thyratron. It is designed for applications with high coulomb transfer and/or high anode current reversal, such as encountered in crowbar applications. The shielded-gap, gradient-grid construction ensures stable, long-term, HV hold-off reliability while minimizing X-ray emission. An auxiliary grid is incorporated for constant short triggering delay time and drift. The tube can be mounted in any position by means of the mounting flange. Cooling can be achieved by forced air or dielectric fluid immersion.

Maximum Ratings	Symbol	Max.	Units
Maximum peak anode voltage, forward	epy	40	kV
Maximum peak anode current, forward	ib	1,500	A
Maximum peak anode current, reverse	ibx	1,000	A
Maximum conducted charge, capacitor discharge plus power supply follow-on		7	Coul.
Maximum average anode current	Ib	2	ADC
Maximum anode current rate of rise	dik/dt	50,000	A/µs
Maximum anode delay time		0.4	µs
Critical anode voltage for conduction	E_{bb}	2	kVDC
Ambient temperature	-55° to +125°C		

Typical Operation	Symbol	Nom.	Min.	Max.	Units
Peak trigger voltage	egy2	1,000	800	2,500	V
Trigger voltage pulse duration	tp	2	1	—	µs
Trigger voltage rise time	tr	—	0.07	0.25	µs
Trigger source impedance	Zg2	100	25	200	Ω
Negative control grid bias	Ecc2	-100	-50	-150	VDC
Open circuit DC voltage	Egy1	150	75	250	VDC
Short circuit DC current	Igy1	100	50	250	mADC
Heater voltage	Ef	6.3	6.1	6.5	V
Heater current (at 6.3 volts)	If	19	—	22	A
Reservoir voltage	Eres	6.3	6.1	6.5	V
Reservoir current (at 6.3 volts)	Ires	2.5	2	3	A
Warm-up time	tk	10	5	—	min.

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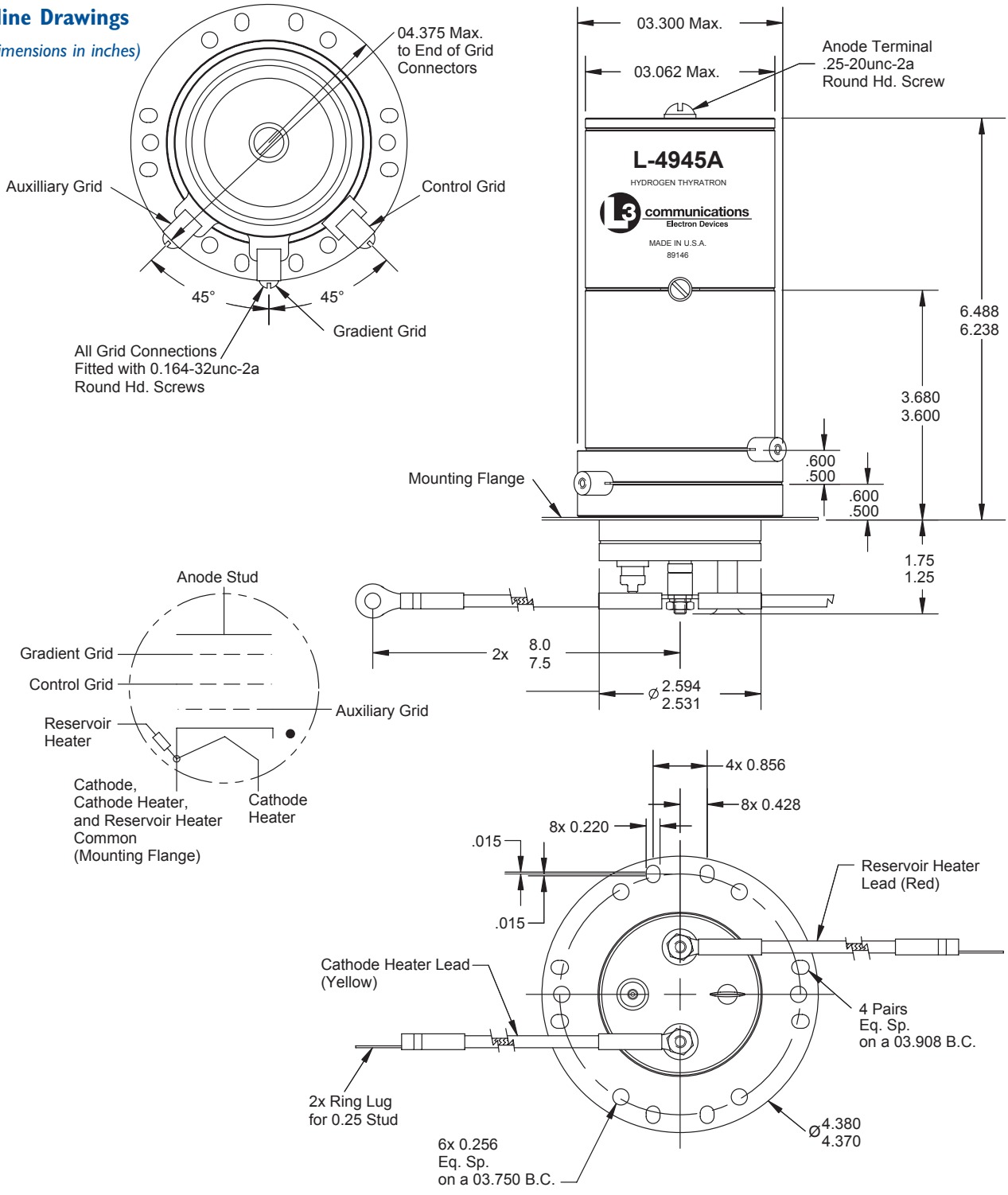
Outline Drawings

(All dimensions in inches)



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