

ADMIRALTY SIGNAL & RADAR ESTABLISHMENT

Specification AD/CV2110 Issue 3. Dated 10.2.54. To be read in conjunction with K1001.	<u>SECURITY</u> <u>Specification</u> <u>Valve</u> Unclassified Unclassified
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Indicates a change.

<u>TYPE OF VALVE:-</u> Gas Modulator Hydrogen Thyatron.			<u>MARKING</u> See K1001/4.			
<u>CATHODE:-</u> Indirectly Heated.			Additional Marking:-			
<u>ENVELOPE:-</u> Glass.			Serial No.			
<u>PROTOTYPE:-</u> BT83.			<u>BASE</u> B4D			
<u>RATING</u>			<u>CONNECTIONS</u>			
			Note	Pin	Electrode	
Heater Voltage	(V)	6.3		1	Grid	
		+0.3		2 & 4	Heater/Cathode	
Heater Current Approx.	(A)	11.5		3	Heater	
Min. Heating Time	(mins)	5		TC	Anode	
Max. Peak Anode Voltage						
(Forward)	(kV)	8	A	<u>TOP CAP</u> See K1001/AI/D5.4.		
Max. Peak Anode Voltage			A, B.	Dimension	Min.	Max.
(Inverse)	(kV)	2		A ϕ (mm)	15.8	16.7
Max. Peak Anode Current	(A)	200		B L (mm)	12	-
Max. Mean Anode Current	(mA)	65	A	<u>DIMENSIONS</u> See K1001/AI/D1.		
Max. Rate of Rise of Anode				Dimension	Min.	Max.
Current	(A/ μ S)	1500	A	A (mm)	-	200
Min. Trigger Volts	(V)	250	C	B (mm)	-	68
Max. Pulse Rep. Freq.	(pps)	2500	A, B.			

NOTES

- These ratings are for operation in a modulator with a pulse length not exceeding 2 μ sec.
- The product of peak anode current and pulse repetition freq. should not exceed 100,000 A/sec. For long life conditions the peak anode current should be a fraction of the rated max.
- The trigger pulse should be at least 3 μ s long at the 250 V level and have a time of rise not less than $\frac{1}{2}$ μ sec. The time of rise may be reduced if higher trigger voltages are used. The impedance of the driving circuit should not exceed 2000 ohms and the grid/cathode d.c. resistance should not exceed 5000 ohms.

TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions			Test	Limits		No. Tested	Note
	Vh (V)	Va (kV)	Vg (V)		Min.	Max.		
a	6.30	-	-	Ih (A)	9.5	12	100%	
b	6.0	8	0	Satisfactory operation in an approved line discharge modulator at 8 kV (min) hold off voltage passing pulses of 45 A peak of 1 μ s duration, 1500 pps.			100%	1
				Grid striking voltage (V)	40	200		
				Anode delay time (μ sec)	-	.2		2
				Duration of test (mins)	2	3		
c	6.6	8	0	As test 'b' except Duration of test (mins)	10	-	100%	

NOTES

1. The valve shall operate satisfactorily at full voltage within 1 min. after application of anode voltage (and after 5 mins. cathode preheating).
2. The anode delay time is the time interval between the striking of the grid and the build-up of anode current.

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION AD/CV. 2110
ISSUE 3 DATED 10. 2.54

AMENDMENT NO. 1

Page 1 Near middle of page at right-hand side, under heading "TOP CAP",

Amend "K1001/AI/D5.1" to "K1001/AI/D5.9"

Immediately beneath under column heading "Dimension"

Amend "D(mm)" to "A(mm)"
and "L(mm)" to "B(mm)"

May, 1960

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T.V.C. for
A.S.W.E.

[2nd copy, issued in 5/64]

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