ADMIRALTY (A.S.R.E.)

VALVE ELECTRONIC CV4052

Specification Adm/CV4052 Issue No. 1 Dated 24.10.55. To be read in conjunction with K1001 and BS1409	SECURITY	
	Specification	Valve
	Unclassified	Unclassified

TYPE OF VALVE - Reliable Gas-filled Voltage Stabiliser with flexible leads

CATHODE - Cold

ENVELOPE - Glass

PROTOTYPE - VX9132

MARKING

K1001/4

BASE

B7G/F

RATING			NOTE
Max. Striking Voltage	(V)	133	
Nominal Stabilised Voltage	(V)	108	
Max. Anode Current	(mA)	15	
Min. Anode Current	(mA)	2	
Voltage Regulation over current range	(V)	3	
Max. Acceleration (Continuous Operation)	(g)	2.5	
Max. Shock (Short Duration)	(g)	500	

CONNECTIONS

Lead	Electrode	
1	Anode	a
2	Cathode	k
3	Internally Connected	
4	Cathode	k
5	Anode	a
6	Internally Connected	
7	Cathode	k

DIMENSIONS

K1001/A1/D11

Dimension (mm)	Min.	Max.
A.Seated height	-	47.5
B.Diameter	16	19
C.Lead length	38	—

MOUNTING POSITION

Any

NOTES

A. All limiting values are absolute

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CV4052

TESTS

To be performed in addition to those applicable in K1001

Tests are to be performed in the specified order unless otherwise agreed with the Inspecting Authority.

Test conditions, unless otherwise specified:-

Va(V)	R lim.(ohms)	Ia (mA)
Adjusted	5K	10.0

A D.C. voltage not exceeding 50V shall be applied between anode and cathode through a limiting resistance of 5K ohms, and shall be increased steadily at a rate not exceeding 25V/Sec. until the valve strikes. The ripple content of the supply shall not exceed 0.25%.

After the valve has struck, the supply voltage shall be further increased until the anode current is 10.0 mA. It shall be maintained constant for 3 mins. before any characteristic other than striking voltage is measured.

K1001	Test	Test Conditions	AQL %	Insp. Level	Symbol	Limits Min.	Limits Max.	Units	Notes
11.1	Vibration	No voltages		100%					1
	Lead continuity	No voltages		100%					
7.1	Glass strain	No voltages	2.5	1					
	GROUP A								
	Leakage	Va = 50V		100%			20	μA	
	Striking voltage			100%	V_s	-	133	V	
	Maintaining voltage			100%	V_m	104	112	V	
	Regulation	δV_m for change in I_a from 2 to 15 mA		100%	Vr	-	3	V	
	Electrical noise.	I_a varied over the range 2 to 15 mA		100%	Va A.C.	-	50	mV P/P	2
	Voltage jumps.	I_a varied over the range 2 to 15 mA		100%		-	1	V	2
	GROUP B								
	Lead fragility	No voltages	6.5	I_A					
	GROUP C	Combined AQL	6.5						
11.2	Resonance Search	Frequency 25-500 c/s		I_A					
	Noise output due to resonance.		2.5		Va A.C.	-	25	mV P/P	
11.3	Fatigue Test	No voltages		I_A					
		Duration 3 x 23 hrs. acceleration = 5 g Frequency = 170 c/s							
	Post Fatigue Test								
	Striking Voltage.		2.5		V_s	-	133	V	
	Change of maintaining voltage.		2.5		δV_m	-	±1.5	V	
11.4	Shock Test	No voltages Hammer angle = 30°		I_A					
	Post-Shock Test								
	Striking Voltage		2.5		V_s	-	133	V	
	Change of maintaining voltage.		2.5		δV_m	-	±1.5	V	

/Group D .....

K1001	Test	Test Conditions	AQL %	Insp. Level	Symbol	Limits Min.	Limits Max.	Units	Notes
AVI/5	GROUP D	Combined AQL	6.5						
	Life Test			I_A					
	Intermediate Point 200 hrs.								
	Maintaining Voltage change.		2.5		δV_m	-	$\pm$ 2	V	
	End point 1000 hrs.								
	Inoperatives		2.5						
	Striking Voltage.		2.5		V_s	-	134	V	
	Maintaining Voltage change over 200 to 1000 hrs.		2.5		δV_m	-	$\pm$1	V	
AIX/2.5	GROUP E	Combined AQL	2.5						
	Electrical re-test after 28 days holding period			100%					
	Inoperatives		0.5						
	Striking Voltage		0.5		V_s	-	134	V	
	Maintaining Voltage		0.5		V_m	103	113	V	

N O T E S

1. This test shall be performed only once and by the valve manufacturing department in order to remove catastrophic failures.

2. A calibrated amplifier detector having a substantially linear response over the range from 25 to 5000 c.p.s. to be connected between anode and cathode. The anode current is to be varied slowly from 2.0 to 15.0 mA at least three times, the rate of sweep being not more than 1 mA per second.