CV2456,57,58,59, CV2460,61,62

MINISTRY OF SUPPLY D.L.R.D./R.A.E.

Specification MOS/CV.2456, CV.2457, CV.2458, CV.2459, CV.2460, CV.2461, CV.2462.

Issue No. 1 Dated 1.4.58

To be read in conjunction with K.1001, BS.448 and BS.1409

SECURITY	
SPECIFICATION	VALVE
Unclassified	Unclassified

TYPE OF VALVE: Corona Stabiliser Valves.

CATHODE: Cold

ENVELOPE: Glass.

PROTOTYPE: SC1/350, SC1/400, SC1/600, SC1/800, SC1/1000, SC1/1200, SC1/1400.

MARKING

See K.1001/4.

BASE

BS.448/B7G.

RATINGS
(All limiting values are absolute)

Normal Operating Current	(μA)	250
Average Incremental Resistance	(KΩ)	50
Temperature Stability	(% per °C)	0.01
CV.2456		
Operating Voltage	(V)	350
Max. Stable Current	(μA)	300
Min. Stable Current	(μA)	5
CV.2457		
Operating Voltage	(V)	400
Max. Stable Current	(μA)	300
Min. Stable Current	(μA)	5
CV.2458		
Operating Voltage	(V)	600
Max. Stable Current	(μA)	300
Min. Stable Current	(μA)	10
CV.2459		
Operating Voltage	(V)	800
Max. Stable Current	(μA)	400
Min. Stable Current	(μA)	15
CV.2460		
Operating Voltage	(V)	1000
Max. Stable Current	(μA)	400
Min. Stable Current	(μA)	20
CV.2461		
Operating Voltage	(V)	1200
Max. Stable Current	(μA)	500
Min. Stable Current	(μA)	20
CV.2462		
Operating Voltage	(V)	1400
Max. Stable Current	(μA)	500
Min. Stable Current	(μA)	20

CONNECTIONS

PIN	ELECTRODE	
1	No connection	NC
2	No connection	NC
3	No connection	NC
4	No connection	NC
5	No connection	NC
6	No connection	NC
7	Cathode	k
Top Cap	Anode	a

DIMENSIONS

BS.448/B7G/2.2 Size Ref. No.4

DIMENSIONS (mm)	MIN.	MAX.
"A" Seated Height	~~55.5~~ 57.2	~~65~~ 66.7
"C" Diameter	16	19
"D" Overall Length	-	~~72.5~~ 73.8

TOP CAP

BS.448/CT1.

TESTS

To be performed in addition to K.1001.

All tests are to be performed in the specified order with the valves mounted in total darkness and except where otherwise stated in an ambient temperature of 25° ± 5°C.

The tests specified in clauses "b" to "g" inclusive are to be performed at least 28 days after Test "a".

	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested	Notes
a	Adjust Ia = 250µA.	Operating Voltage				
		CV.2456 (V)	335	365		
		CV.2457 (V)	380	420		
		CV.2458 (V)	580	620	100%	1&2
		CV.2459 (V)	780	820		
		CV.2460 (V)	975	1025		
		CV.2461 (V)	1170	1230		
		CV.2462 (V)	1365	1435		
b	Adjust Ia = 250µA.	Operating Voltage				
		CV.2456 (V)	335	365		
		CV.2457 (V)	380	420		1,
		CV.2458 (V)	580	620	100%	2 & 3
		CV.2459 (V)	780	820		
		CV.2460 (V)	975	1025		
		CV.2461 (V)	1170	1230		
		CV.2462 (V)	1365	1435		
c	Adjust Ia:-	Current Stability				
	CV.2456 = 300µA	Meter Fluctuations (µA)	-	5	100%	4
	CV.2457 = 300µA					
	CV.2458 = 300µA					
	CV.2459 = 400µA					
	CV.2460 = 400µA					
	CV.2461 = 500µA					
	CV.2462 = 500µA					
d	Adjust Ia:-	Current Stability				
	CV.2456 = 5µA	Meter Fluctuations (µA)	-	5	100%	4
	CV.2457 = 5µA					
	CV.2458 = 10µA					
	CV.2459 = 15µA					
	CV.2460 = 20µA					
	CV.2461 = 20µA					
	CV.2462 = 20µA					

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	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested	Notes
e	Adjust Ia = 225μA	Regulation (1) (1) Test as in Test 'b' above but with test conditions modified as in Test Condition column at left. (2) Change in operating voltage between values found in Test 'b' and Test 'e(1)':-			100%	2 & 5
		CV.2456 (V)	-	1.0		
		CV.2457 (V)	-	1.0		
		CV.2458 (V)	-	1.5		
		CV.2459 (V)	-	2.0		
		CV.2460 (V)	-	2.5		
		CV.2461 (V)	-	3.0		
		CV.2462 (V)	-	3.5		
f	Adjust Ia = 275μA	Regulation (2) (1) Test as in Test 'b' above but with test conditions modified as in Test Condition column at left. (2) Change in operating voltage between values found in Test 'b' and Test 'f(1)':-			100%	2 & 5
		CV.2456 (V)	-	1.0		
		CV.2457 (V)	-	1.0		
		CV.2458 (V)	-	1.5		
		CV.2459 (V)	-	2.0		
		CV.2460 (V)	-	2.5		
		CV.2461 (V)	-	3.0		
		CV.2462 (V)	-	3.5		
g	The valve to be run for a minimum period of 7 hours with Ia = 250μA	Stability Test (1) Test as in Test 'b' above but with test conditions modified as in Test Condition column at left. (2) Change in operating voltage between values found in Test 'b' and Test 'g(1)':-			100%	2 & 6
		CV.2456 (V)	-	2.0		
		CV.2457 (V)	-	2.0		
		CV.2458 (V)	-	2.0		
		CV.2459 (V)	-	2.0		
		CV.2460 (V)	-	2.5		
		CV.2461 (V)	-	3.0		
		CV.2462 (V)	-	3.5		

	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested	Notes
h		Temperature Stability				
	Adjust Ia = 250μA. Ambient Temperature = -20°C.	(1) Test as in Test 'b' but with Test Conditions modified as in Test Condition column at left.			T.A.	2 & 5
	Ambient Temperature = +70°C.	(2) Test as in Test 'b' but with Test Conditions modified as in Test Condition column at left.				
		(3) Change in operating voltage between values obtained in Test 'h(1)' and Test 'h(2)':				
		CV.2456 (V)	-	17.5		
		CV.2457 (V)	-	4.0		
		CV.2458 (V)	-	6.0		
		CV.2459 (V)	-	8.0		
		CV.2460 (V)	-	10.0		
		CV.2461 (V)	-	12.0		
		CV.2462 (V)	-	21.0		

NOTES

1. The valves shall have been in the ageing rack immediately prior to Test 'b'. They shall be quickly transferred to the test position. Time taken to strike shall be less than 0.5 secs.

2. The values of operating voltage are to be recorded.

3. An increase in voltage between the value obtained in Test 'b' and that recorded in Test 'a' within the following limits is permissible:-

Valve Type	Allowable increase in Test 'b' from Test 'a'
CV.2456, CV.2457	10 volts.
CV.2458, CV.2459, CV.2460, CV.2461, CV.2462.	5 volts.

Should the value of operating voltage recorded in Test 'b' be higher than that specified above, the valves are to be held for a further minimum period of 28 days when if the upward drift is still evident the valve shall be rejected.

4. To be performed in an approved circuit.

5. Tests to be completed within 30 secs.

6. On completion of Test 'f' the valves shall be run for the seven hour stability test. The conditions of Note 1 shall apply.

SPECIFICATION MOS/CV.2456,57,58,59,60,61,62.
ISSUE No.1 DATED 1.4.58.

AMENDMENT No. 1 DATED 1.3.59.

Page 1 Dimensions

Amend the dimensions for "A" Seated Height and "D" Overall Length to read as follows:-

DIMENSIONS (mm)	MIN.	MAX
"A" Seated Height	57.2	66.7
"D" Overall Length	-	73.8

February, 1959
N.54377/D

T.V.C. for R.A.E.