

ADMIRALTY SIGNAL AND RADAR ESTABLISHMENT

Specification AD/CV2399		<u>SECURITY</u>	
Issue No. 1 dated 14th December, 1956.		<u>Specification</u>	<u>Valve</u>
To be read in conjunction with K1001		Unclassified	Unclassified
<u>TYPE OF VALVE:</u> Half-Wave Xenon-filled Rectifier		<u>MARKING</u>	
<u>CATHODE:</u> Directly heated; oxide coated.		See K1001/4	
<u>ENVELOPE:</u> Glass, clear.		<u>BASE</u>	
<u>PROTOTYPE:</u> GXU.3 (E.2542)		Goliath Edison Screw	
<u>RATINGS</u>		<u>CONNECTIONS</u>	
(All limiting values are absolute)		Thread	f
		Button	f
		T C	a
Filament Voltage (V)	4.0	<u>TOP CAP</u>	
Filament Current (A)	11.0	See Drawing on Page 3	
Max. Peak Inverse Anode Voltage (kV)	13.0	(The CT9 cap meets these requirements)	
Max. Peak Anode Current (A)	6.0	<u>DIMENSIONS</u>	
Max. Mean Anode Current (A)	1.25	See Drawing on Page 3	
Max. Operating Frequency (c/s)	150		
Voltage Drop across Valve (V)	13		
Max. Permissible Ambient Temperature Range (°C)	-55 to +70		
Min. Cathode heating Time (Secs)	30		
<u>NOTES</u>			
A. The valve may be mounted in any position.			
B. The valve can be used as a replacement for CV5 in all applications of the latter in which the peak inverse voltage does not exceed 13 kV.			

TESTS

To be performed in addition to those applicable in K1001, after a holding period of 28 days.

In all tests except test (d),  $V_f = 4.0V$  (r.m.s.)

	Test	Test Conditions	AQL	Insp. Level	Limits		Note
					Min.	Max.	
a	If (A)		6.5	II	10	12	
b	<u>OPERATION</u>	Operate valve(s) in a rectifier circuit using 50 c/s ac, dc output current of 1.25A per valve, and anode PIV of 14.5 kV.		100%			Valve(s) shall operate satisfactorily for test period of 5 minutes without sign of arc-back or sparking
c	<u>Va for Ia = 10A</u> (V)	Va (dc) applied for not more than two seconds, to give Ia = 10A. Test not to be repeated within one minute.		100%	-	13	
d	<u>BUMP</u>  <u>POST BUMP TESTS</u>	As described in section 4.9.19.3 of K1006 with hammer arm released from angle of 20°.  <u>Operation.</u> As in test (b). <u>Volts Drop.</u> As in test (c).	6.5  6.5	1c			1
e	<u>LIFE</u> (Hrs)	Operate valve(s) in a rectifier circuit using 50 c/s ac with dc output current of 1.25A per valve, with peak anode current of 5A per valve, and with anode PIV of 13 kV.		TA	500	-	2
<u>NOTES</u>							
<ol style="list-style-type: none"> <li>The valve shall be subjected to five blows in each of two mutually perpendicular directions before being submitted to the Post Bump Tests.</li> <li>The life test end-point occurs when Va at Ia = 10A, with test conditions as in test (c), exceed 20V.</li> </ol>							

