

ADMIRALTY SIGNAL ESTABLISHMENT

Specification AD/CV1257/Issue 5. Dated 17.7.47. To be read in conjunction with K1001, ignoring clauses:- 5.2; 5.3; 5.8.	<u>SECURITY</u>	
	<u>Specn.</u> Restricted	<u>Valve</u> Unclassified

<u>TYPE OF VALVE:-</u> Air-cooled modulator tetrode. <u>CATHODE:-</u> Indirectly heated, oxide coated. <u>ENVELOPE:-</u> Metal glass. <u>PROTOTYPE:-</u> E.1155.		<u>MARKING</u> See K1001/4.	
<u>RATING</u>		<u>BASE</u> See K1001/AIV/D7.	
		Pin	Electrode
Heater Voltage (V)	8.0	1	Grid
Heater Current (A)	6	2	Heater
Max. Screen Voltage (kV)	2	3	Grid
Max. Anode Voltage (kV)	12	4	Heater and Cathode
Max. Anode Dissipation (W)	60		
Max. Screen Dissipation (W)	10		
<u>CAPACITANCES (pF. Approx.)</u>		<u>DIMENSIONS AND CONNECTIONS</u> See page 2, Fig.3.	
Ca - all	7.4 to 11.1	<u>PACKAGING</u> See K1005.	
Cg - all	20.0 to 33.0		
Cag	1.0		

NOTES

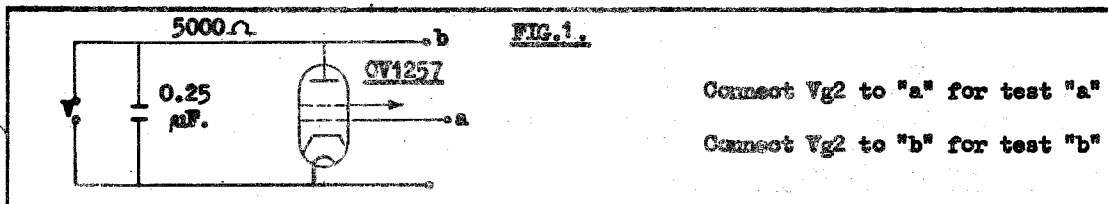
- A. The filament volts should always be run up slowly, and not switched on fully at once.
- B. Checked at Type Approval.

TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions					Test	Limits		No. Tested	Notes
	Vh (V)	Va (V)	Vg2 (V)	Vg1 (V)	Ia (mA)		Min.	Max.		
a	8.5		=Vg1	Ad-justed	1	Anode hot flash process.			100%	1
	V (See Fig.1.) raised slowly to 13 kV and maintained there until flashing substantially ceases.									
b	8.5		=Va	Ad-justed	2	Grid hot flash process.			100%	1
	V (See Fig.1.) raised slowly to 13 kV and maintained there until flashing substantially ceases.									
c	8.0					Ih (A)	5.45	6.65	100%	
d	8.0		400	Ad-justed	150	-Ig1 total after 5 mins. (uA)		150	100%	
e	8.0	Adjusted = x (say)		-80	100	"Amplification factor"				
	8.0	Adjusted = y (say)		0	100	$\frac{x-y}{80}$	3.5	5.5	100%	

	Test Conditions						Test	Limits		No. Tested	Notes
	Vh (V)	Va (V)	Vg2 (V)	Vg1 (V)	Ia (mA)	Ia+Ig2 (mA)		Min.	Max.		
f	800	12000	2000		1		Cut-off -Vg1 (V)	-	1,100	-	
To apply only to valves whose factor in 'e' is less than 4.5.											
g	8.0	3000	=Va	0			Peak (Ia+Ig2) current (A)	12	-	100%	2
Peak Ia+Ig2 current measured.											



NOTES

- Processes "a" and "b" need be applied once only to each valve.
- (a) Peak (Ia+Ig2) to be measured with $T_p = 2 \mu S$, $REP = 50 p/s$, the pulse shape to be sinusoidal.
- (b) Test "g" may be considered satisfied provided the following operational test is passed. In all cases of doubt test "g" shall be the deciding test:-

The test shall be carried out in an approved transmitter of the 271 type replacing the NF98 by a non-inductive 1000-ohm resistance. The peak current through this resistor is to be adjusted to 9A, measured by means of the 5-ohm non-inductive monitoring resistance in the transmitter box. The shape of the pulse must be sensibly square (see Figs. 2a and 2b) and there must be no continued flashing.

FIG. 2a

ACCEPT

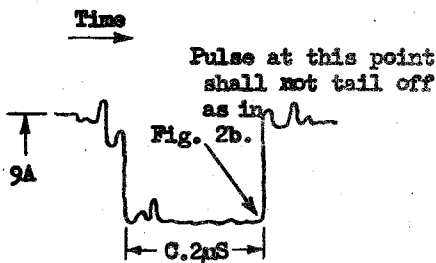
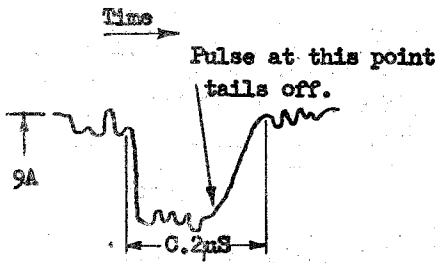
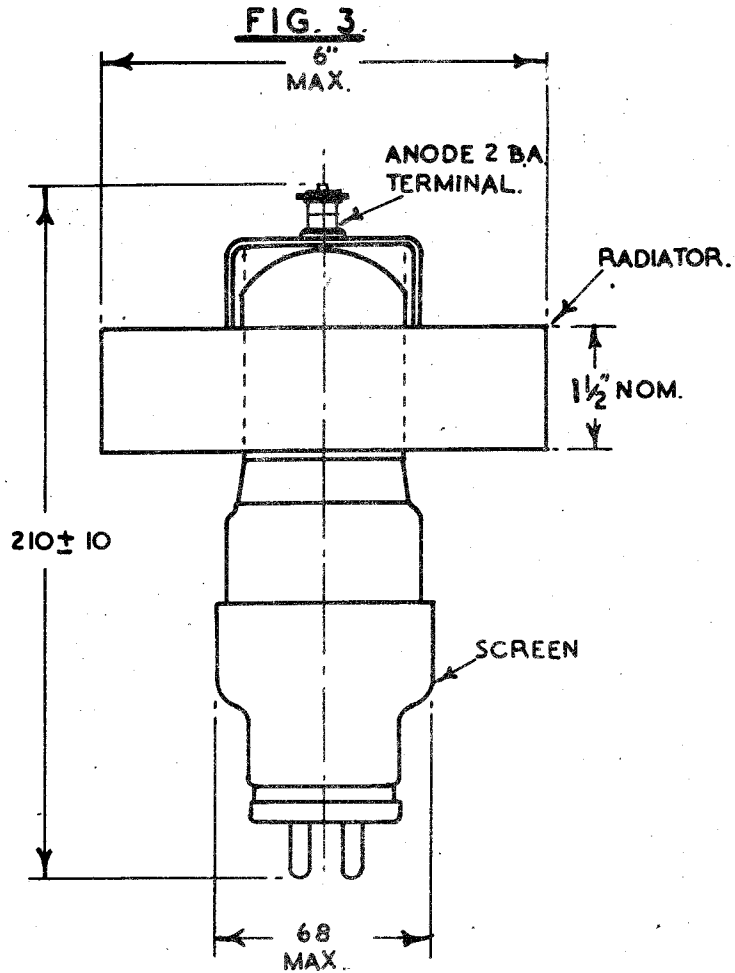


FIG. 2b

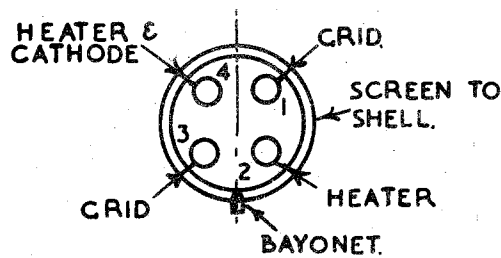
REJECT



Max. time of fall from 8 A to zero: $\frac{1}{2} \mu S$.



VIEW OF BASE.
SHOWING CONNECTIONS.



ALL DIMENSIONS ARE IN MILLIMETRES EXCEPT WHERE OTHERWISE STATED.