VALVE ELECTRONIC

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

CV. 2387

SPECIFICATION M.O.S./CV.2387	SECURITY	
Issue No. 1 Dated 1.4.59.	SPECIFICATION	<u>AVJAV</u>
To be read in conjunction with K.1001, BS.448 and BS.1409.	Unclassified	Unclassified
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TYPE OF VALVE: Low Grid Current Electrometer Pentode. CATHODE: Indirectly heated.			MARKING See K.1001/4.			
ENVELOPE: Glass. PROTOTYPE: VX 8124,			<u>BASE</u> BS.448/B8D/F/1.1 Note B			
RATINGS All limiting values are absolute. NOTES			CONNECTIONS			
Heater Voltage (V) Heater Current (mA) Max. Operating Anode Voltage (V) Max. Operating Screen Voltage (V) Max. Cathode Current (µA) Max. Heather-Cathode Voltage (V) Max. Bulb Temperature (°C) Amplification Factor (µg1g2) Mutual Conductance (µA/V) Max. Reverse Grid Current (µµA)	5.0 185 100 100 250 ±50 100 19 200 50	C C B,D	Lead Electrode		g1 g3 h a g2 h	
CAPACITANCES (pF) Cin (nom.) Cout (nom.) Cag (max.)	3.8 4.4 0.3		See 3S.446/B6D/F/2.1 Size Ref. No.2. DIMENSIONS MIN. MAX A 29.0 32. B - 38.		32.0 38.1 10.16	

NOTES

- A. This voltage must be maintained within 5%.
- B. Care must be taken to avoid contamination of the base when handling these valves and particularly when soldering into equipment. The leads must not be soldered nearer that 5mm nor bent closer than 1.5mm from the seal.
- C. Measured with Va = Vg2 = 50V; $Ia = 75\mu A$.
- D. Measured under the test conditions in Note C. If the valves have not been operated for some days, it may be necessary to allow 20 minutes running at operating conditions before this limit is met. For optimum performance the valve should be screened from external light.

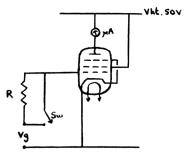
To be performed in addition to those applicable in K.1001.

TEST CONDITIONS: Unless otherwise stated.							
Va (V) 50	Vg2 Vg (V) (V) 50 0	3	5	h V) ⊙			
Test	Test Conditions		Insp.	Symbol	Lin	Max.	Units
GROUP ▲		-			Min.	MAX.	
Heater Current		-	100%	Ih	170	200	mA
Negative Grid Voltage	Adjust Vg1 for Ia = 75μ A.	-	100%	-Vg1	1.9	3.5	٧
Reverse Grid Current	Adjust Vg1 for Ia = 75μ A. Note 1.	-	100%	-Ig1	-	50	μμ
Mutual Conductance	Adjust Vg1 for Ia = 75μ A.	-	100%	gm	130	270	μ λ /₹
Screen Current	Adjust Vg1 for Ia = 75μA.	-	100%	Ig2	15	35	μΔ
GROUP B Capacitance	To be measured on a 1Mc/s R.F. bridge with valve mounted in a fully shielded socket. Valve screened.	6.5	IC	Cin Cout Cag1	3.0 3.5 -	4.6 5.3 0.3	pr pr

NOTES

- To be measured in an approved equipment. The conditions of Note 'D' on page 1 should be applied. A typical test circuit is shown below.
- 2. The connections for these tests shall be:-

TEST	HP	LP	ß
Cin	1	2,3,5,6,7,9.	4,8.
Cout	4,8.	2,3,5,6,7,9.	1
Cag1	1	4,8.	2,3,5,6,7,9.



Operating Details

R is a known resistance (of the order of $10^{10} \frac{\Omega}{\Omega}$)

With 'Sw' closed, adj. Vg for Ia = 75uA. note Vg.

75μA, note Vg.

Open 'Sw' readjust Vg for Ia = 75μA.

Then $\frac{\Delta V_g}{R} = -I_{g1}$.

LOW GRID CURRENT MEASURING CIRCUIT

ELECTRONIC VALVE SPECIFICATIONS SPECIFICATION CV 2387

ISSUE 1. DATED 1.4.59 AMENDMENT NO.1

Page 2. Test Conditions.

Under this heading amend right-hand entry to Vh

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VALS 95% N. 16435