VALVE ELECTRONIC CV2901

ADMIRALTY SIGNAL AND RADAR ESTABLISHMENT

Specification AD/CV2901 Issue No. 1 dated 22.11.55. To be read in conjunction with K1001, B.S.448 and B.S.1409	SECURITY Specification: Unclassified Valve: Unclassified

TYPE OF VALVE: Low Hum, Low Microphony Pentode

CATHODE: Indirectly heated

ENVELOPE: Glass, Unmetallised

PROTOTYPE: EF86, Z729

MARKING

K1001/4

BASE

B.S.448/B9A

			Note
Heater Voltage	(V)	6.3	
Heater Current	(A)	0.2	
Max. Anode Voltage (Ia = 0)	(V)	550	A
Max. Screen Voltage (Ig2 = 0)	(V)	550	A
Max. Anode Dissipation	(W)	1.0	
Max. Screen Dissipation	(W)	0.2	
Max. D.C. Anode Voltage	(V)	300	
Max. D.C. Screen Voltage	(V)	200	
Max. Cathode Current	(mA)	6.0	
Anode Current	(mA)	3.0	B
Screen Current	(mA)	0.55	B
Mutual Conductance	(mA/V)	~~1.85~~ 2.5	B
Anode Impedance	(Megohms)	2.5	B
"Inner" Amplification Factor		38	
Vhk Max.	(V)	50	

CONNECTIONS

Pin	Electrode
1	g2
2	s
3	k
4	h
5	h
6	a
7	s
8	g3
9	g1

Max. external resistance between g1 and k: for Wa > 0.2W = 3MΩ; for Wa < 0.2W = 10MΩ

CAPACITANCE (pF)

c_{ag} (max)		0.05	C
c_{ge}	3.85	~~4.3~~	C
c_{ae}	5.15	~~5.4~~	C

DIMENSIONS

B.S.448/B9A/2.1
Size Ref.No.3

Dimensions (mm)	Min	Max.	
A.Seated Height	-	~~60.5~~	49
C.Diameter	19.0	22.2	
D.Overall Length	-	~~67.5~~	56

NOTES

A. Absolute maximum values.

B. Measured at Va = 250, Vg2 = 140, Vg1 = -2.

C. Measured without metal screen.

TESTS

To be performed in addition to those applicable in K1001

	Test Conditions (See K1001/A.III)					Test	Limits		No. Tested	Note
							Min.	Max.		
	Pins to H.P.		Pins to L.P.		Pins to E	Capacitances (pF)				
a	6		9		1,2,3,4 5,7,8	C_{ag}	-	0.05	T.A.	1
	9		1,2,3,4, 5,7,8		6	C_{ge}	~~3.85~~ 3.4	4.6 ~~4.3~~	20 per week	1
	6		1,2,3,4, 5,7,8		9	C_{ae}	~~4.5~~ ~~4.8~~	~~5.8~~ ~~5.7~~		1
	Vh (V)	Va (V)	Vg3 (V)	Vg2 (V)	Vg1 (V)					
b	6.3	0	0	0	0	Ih (A)	0.185	0.215	100% or S	
c	6.3	14	0	14	14	Emission (mA)	32	-	100%	2
d	6.3	250	0	140	-2.0	Ia (mA)	2.15	3.85	100%	
e	6.3	250	0	140	-2.0	gm (mA/V)	~~1.55~~ ~~1.4~~	~~2.45~~ ~~2.3~~	100%	
f	6.3	250	0	140	-7.0	Ia (nA)	0	40.0	100%	3
g	6.3	250	0	140	-2.0	Ig2 (mA)	-	.85	100%	
h	6.3	250	0	140	-2.0	Reverse Ig1 (µA)	0	~~0~~.4	100%	
j	6.3	100	0	75	-1.4	Microphony (µV)	0	70.0	See Note 4	4,6, 7
k	6.3	100	0	75	-1.4	Hum (Grid) (µV)	0	5.0	100%	5,6
l	6.3	100	0	75	-1.4	Hum (Cathode) (µV)	0	50.0	100%	5,6
m	6.3	100	0	75	-1.4	Hiss (µV)	0	5.0	100% or S	6,7

NOTES

1. Measured at 1.0 Mc/s approx. and without metal screen.

2. The test voltage shall be applied only for as long as is necessary to measure the cathode current.

3. With 1 megohm meter-protecting resistance in series with anode.

4. Readings are to be taken with valve vibrating with an excitation frequency between 25 and 50 c/s at $2\frac{1}{2}$g, with vibration applied perpendicular to the plane of grid 1. During vibration, the valve shall be tapped lightly. The highest reading obtained before or after the tapping shall be the recorded value. The number of valves tested shall be in accordance with Inspection Level = I and AQL = 2.5%.

5. The valve shall be tested using a low-loss test socket. The Hum tests shall be conducted by alternately earthing Pins 4 and 5; the highest reading being recorded.

6. Valves to be tested in the amplifier described in Appendix A to this specification. Copies of this Appendix may be obtained from the specifying Authority. The limits given in the specification refer to the equivalent grid 1 R.M.S. voltage.

7. Microphony and Hiss tests may be conducted with D.C. heating of the cathode.

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION AD/CV2901
Issue No. 1 dated 22.11.55.

AMENDMENT No. 1.

Page 1.	Dimensions.	Amend dimension "A" Seated Height to read 49 mm, and dimension "D"-Overall Length to read 56 mm.
	Mutual Conductance	Amend figure to read 2.0 mA/V.

/Capacitance.

	Capacitance.	Amend Cge to read:- 3.85 pF " Cae to read:- 5.15 pF
Page 2.	Clause "a".	Amend Cge limits to read:- 3.4 pF min. and 4.3 pF max. Amend Cae limits to read:- 4.5 pF min. and 5.8 pF max.
	Clause "e".	Amend limits to read:- 1.55 mA/V min. and 2.45 mA/V max.

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N. 8355/D

/AAS
18/60