

ADMIRALTY SIGNAL ESTABLISHMENT

Specification AD/CV302/Issue 5.

Dated 16.1.47.

To be read in conjunction with K1001.

SECURITYSpecn.

Restricted

Valve

Unclassified

→ Indicates a change.

TYPE OF VALVE:- Triode - Heptode.CATHODE:- Indirectly heated.ENVELOPE:- Glass, enclosed in metal shell.PROTOTYPE:- ECH22.MARKING

See K1001/4.

BASE AND CONNECTIONSB8G (MOD.)See K1001/AIV/D12  
except for dimension  
S max. = 32 mms.RATING

Note

Heater Voltage	(V)	6.3	
Heater Current	(A)	0.33	
Max. Heptode Anode Voltage	(V)	300	
Max. Grid Voltage	(V)	-1.3	A
Max. Grid 2 and Grid 4 Voltage	(V)	{ 100 300	B C
Max. Triode Anode Voltage	(V)	175	
Max. Triode Anode Dissipation	(W)	0.8	
Max. Grid-Cathode Resistance	(MΩ)	3.0	

Pin	Electrode
1	Heater
2	Heptode Anode
3	Triode Anode
4	Triode Grid, Grid 3.
5	Grid 2, Grid 4.
6	Grid 1.
7	Cathode, Grid 5 internal shield
8	Heater
Spigot	Metal shell

TYPICAL OPERATING CONDITIONS  
(Heptode Section)

Anode Voltage	(V)	250	
Grid 3 resistor	(Ω)	50,000	
Grid 3 current	(μA)	200	
Grid 1 Voltage	(V)	-2.0	
Anode Current	(mA)	3.0	
Grid 2 - Grid 4 current	(mA)	6.2	
Internal Resistance	(MΩ)	1.4	
Conversion Conductance	(μA/V)	750	

DIMENSIONS  
See drawing Page 3.NOTES

- A. For grid current of 0.3 μA.
- B. For  $I_a = 3$  mA.
- C. For  $I_a < 1$  mA.
- D. Capacities capable of producing a hum in equipment.

CAPACITANCES  
(pF. approx.)

C <sub>gh</sub>	7.2	D
C <sub>ah</sub>	9.0	D
C <sub>ag1</sub>	0.005	
C Triode grid/grid 3	9.3	
C <sub>a</sub> Heptode/a Triode	2.1	

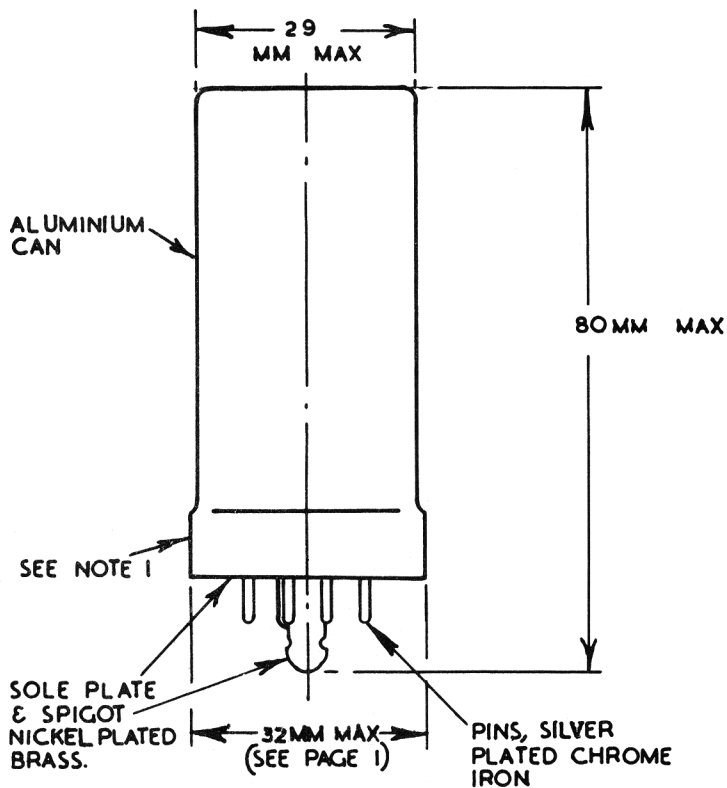
TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions						Test	Limits		No. Tested	Note
	Vh (V)	VaH (V)	Vg2 (V)	Vg1 (V)	VaT (V)	VgT (V)		Min.	Max.		
a	6.3	-	-	-	-	-	Ih (A)	0.31	0.35	100% or S	
→ b	6.3	-	-	-	15 (AC)	15 (AC)	Ie (mA)	35	-	100%	5
→ c	6.3	15 (AC)	15 (AC)	15 (AC)	-	-	Ie (mA)	35	-	100%	5
d	6.3	300	100	0	175	-3	Heptode Ia (mA)	7.8	14.4	100%	
e	6.3	300	100	-4	175	-3	Heptode Ia (mA)	1.7	3.5	100%	
f	6.3	300	100	-20	175	-3	Heptode Ia (μA)	-	125	100%	1
g	6.3	300	100	0	175	-3	Triode Ia (mA)	8.5	17.0	100%	
h	6.3	300	100	0	175	-13	Triode Ia (mA)	-	2.5	100%	
j	6.3	300	100	-	175	-3	Ig2 + Ig4 (mA)	3.3	5.7	100%	2
k	6.3	300	100	-4	175	-4	Heptode Reverse Ig1 (μA)	-	0.6	100%	
l	6.3	300	100	-4	175	-4	Triode Reverse Ig (μA)	-	0.6	100%	
m	6.3	75 V. between H and C (cathode positive)					Insulation (μA)	-	22	100%	4

NOTES

1. Protective Resistance of 1 MΩ in anode circuit.
2. Cathode Resistance of 165Ω.
3. All triode grid voltages are measured with respect to the cathode.
4. Protective Resistance of 1 Megohm in series.
- 5. This is a "spot reading" of the mean current, measured on a D.C. ammeter, and the value if not meant to be run at this rating for more time than is required to take the reading.



SPECIFICATION NO. AD/CV302 ISSUE 5 DATED 16.1.47.  
AMENDMENT "A"

Drawing on page 3 - overall length.

For "80 mm Max." read "90 mm Max."

A.S.R.E. EXTN., WATERLOOVILLE.

20.1.1948.