

ADMIRALTY SIGNAL ESTABLISHMENTVALVE ELECTRONIC**CV302**

Specification AD/CV302/Issue 5. Dated 16.1.47. To be read in conjunction with K1001.	<u>SECURITY</u>	
	<u>Specn.</u> Restricted	<u>Valve</u> Unclassified

→ Indicates a change.

<u>TYPE OF VALVE:-</u> Triode - Heptode.		<u>MARKING</u>	
<u>CATHODE:-</u> Indirectly heated.		See K1001/4.	
<u>ENVELOPE:-</u> Glass, enclosed in metal shell.		<u>BASE AND CONNECTIONS</u>	
<u>PROTOTYPE:-</u> ECH22.		B8G (MOD.)	
<u>RATING</u>		Note	See K1001/AIV/D12 except for dimension S max. = 32 mms.
Heater Voltage (V)	6.3	A B C  D D	Pin
Heater Current (A)	0.33		Electrode
Max. Heptode Anode Voltage (V)	300		1 Heater
Max. Grid Voltage (V)	-1.3		2 Heptode Anode
Max. Grid 2 and Grid 4 Voltage (V)	{ 100 300		3 Triode Anode
Max. Triode Anode Voltage (V)	175		4 Triode Grid, Grid 3.
Max. Triode Anode Dissipation (W)	0.8		5 Grid 2, Grid 4.
Max. Grid-Cathode Resistance (MΩ)	3.0		6 Grid 1,
			7 Cathode, Grid 5 internal shield
			8 Heater Spigot
<u>TYPICAL OPERATING CONDITIONS</u> (Heptode Section)			<u>DIMENSIONS</u>
Anode Voltage (V)	250		See drawing Page 3.
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		
<u>CAPACITANCES</u> (pF. approx.)			<u>NOTES</u>
C <sub>gh</sub>	7.2		A. For grid current of 0.3 mA.
C <sub>ah</sub>	9.0		B. For I <sub>a</sub> = 3 mA.
C <sub>ag1</sub>	0.005		C. For I <sub>a</sub> < 1 mA.
C Triode grid/grid 3	9.3		D. Capacities capable of producing a hum in equipment.
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

- Protective Resistance of 1 MΩ in anode circuit.
- Cathode Resistance of 165Ω.
- All triode grid voltages are measured with respect to the cathode.
- Protective Resistance of 1 Megohm in series.
- 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.

