

MINISTRY OF SUPPLY - DLRD(A)/IRE(South)

VALVE ELECTRONIC CV2127

Specification MOS(A)/CV2127 Issue 5 Dated 24.4.56 To be read in conjunction with K1001 and BS.448	<table border="1"> <tr> <th colspan="2">SECURITY</th></tr> <tr> <td>Specification</td><td>Valve</td></tr> <tr> <td>UNCLASSIFIED</td><td>UNCLASSIFIED</td></tr> </table>	SECURITY		Specification	Valve	UNCLASSIFIED	UNCLASSIFIED
SECURITY							
Specification	Valve						
UNCLASSIFIED	UNCLASSIFIED						

← Indicates a change

TYPE OF VALVE - Video Output Pentode		MARKING	
CATHODE	- Indirectly-heated	See K1001/4	
ENVELOPE	- Glass - Unmetallised		
PROTOTYPE	- 6CH6		
RATING		BASE	
		B9A	
		See BS.448 : B9A/1.1	
Note		CONNECTIONS	

NOTES

- A. All limiting values are absolute
- B. Measured at $V_a = V_{g2} = 250V$; $V_{g1} = -4.5V$; $V_{g3} = 0$
- C. Measured without a metal screen or skirted holder

To be performed in addition to those applicable in K1001

Test Conditions - unless otherwise specified									
		Vh (V)	Va (V)	Vg1 (V)	Vg2 (V)	Vg3 (V)			
		6.3	250	-4.5	250	0			
Test		Test Conditions		AQL %	Insp. Level	Sym- bol	Limits Min. Max.		Units
a	Heater Current			6.5	IA	Ih	0.69	0.81	A
b	Anode Current				100%	Ia	30	50	mA
c	Screen Grid Current				100%	Ig2	-	7.5	uA
d	Reverse Grid Current				100%	Ig1	-	2.5	uA
e	Mutual Conductance			6.5	IA	gm	9.0	13.5	mA/V
f	Inner Amplification Factor			6.5	IC	ug1g2	20	32	-
g	Tail Anode Current	Vg1 = -17V			100%	Ia	-	100	uA
h	DC Emission	Va = Vg1 = Vg2 = 15V; Vg3 = 15V max. Note 1			100%	Ia	125	-	mA
j	Peak Cathode Current	Note 2		6.5	IA	Ik	1.5	-	A
k	Capacitance (1)	Note 3			TA	Cag1	-	0.25 0.18	pF
m	Capacitance (2)	Note 3		6.5	IC	C in C out	10.0 11.5 3.8 4.0	15.0 16.5 5.8 6.0	pF pF

NOTES

1. Test voltages to be applied only for a sufficient time to obtain a steady reading.
2. Anode and grids strapped. Peak applied voltage = 70V; tp = 10.0 usecs min; FRF = 50pps; pulse shape: half sinewave
3. Measured without a metal screen or skirted holder.

ELECTRONIC VALVE SPECIFICATIONS

MOS (A)/CV2127

ISSUE 5 - Dated 24.4.56

AMENDMENT No. 1

Page 2

Clause 'k' Capacitance Max limit delete 0.25 pF and
insert 0.18 pF.

Clause 'm' Capacitance Cin. Under Limits Min and Max.
 delete figures 11.5 and 16.5 and
 insert 10.0 and 15.0.

Capacitance C out Under Limits Min. and Max.
delete figures 3.8 and 5.8 and insert
4.0 and 6.0

March, 1960.

R.R.E.

N. 16396

✓Ans 75/10

VALVE ELECTRONIC TYPE

CV 2127

Maximum Ratings (other than those given in the Test Specification)

Max. DC Cathode Current	65mA
Max. Peak Cathode Current	1.5A [⊞]
Max. Control Grid Circuit Resistance	0.1 Megohm /
Max. Bulb Temperature	250°C
Max. Anode Dissipation (Triode Connected)	12.5W

[⊞] The duration of current flow must not exceed 2 μ s and must not be greater than 5% of the duty cycle.

/ This value may be increased to 0.22 megohm if cathode bias is employed.

Typical Operation

	<u>Pentode Connection</u> g3 connected to cathode.		<u>Triode Connection</u> g3 connected to cathode and g2 to anode.		
Heater voltage	6.3	6.3	6.3	6.3	6.3 volts
Anode voltage	250	250	150	200	250 volts
Screen voltage	200	250	-	-	- volts
Grid voltage	-2.5	-4.5	-1.5	-2.5	-4.5 volts
Cathode bias resistor	54	100	45	57	100 ohms
Anode Current	40	40	33	44	46 mA
Screen Current	6.5	6.0	-	-	- mA
Anode Impedance	60,000	50,000	2,100	1,820	1,870 ohms
Mutual Conductance	13	11	12.5	14.5	13 mA/V
Inner Amplification Factor	26	26	-	-	-
Amplification Factor	-	-	26.2	26.4	25.8

CV 2127

Class A Amplifier (Single ended)

	<u>Pentode Connection</u>	<u>Triode Connection</u>	
Anode Voltage	250	250	volts
Screen Voltage	250	-	volts
Cathode bias resistor	100	100	ohms
Anode current	40	46	mA
Screen current (no signal)	6.0	-	mA
Screen current (max. signal)	8.5	-	mA
Anode Load Impedance	6000	4000	ohms
Peak Grid Input Voltage	3.5	4.5	volts
Power Output	3.0	0.8	watts
Total Harmonic Distortion	8.5%	4%	

Class A Push-pull

	<u>Pentode Connection</u>	<u>Triode Connection</u>	
Anode Voltage	250	250	volts
Screen Voltage	250	-	volts
Anode Current	80	92	mA
Cathode Bias Resistor	50	50	ohms
Screen Current (no signal)	12	-	mA
Screen Current (max signal)	17.5	-	mA
Anode to Anode Load Impedance	9000	5000	ohms
Peak Grid to Grid Input Voltage	9.0	9.0	volts
Power Output	8.0	1.8	watts
Total Harmonic Distortion	7.5%	1.0%	

CV2127 is suitable for use as a wide band video amplifier where the load resistor must be low to permit working into a high capacity.

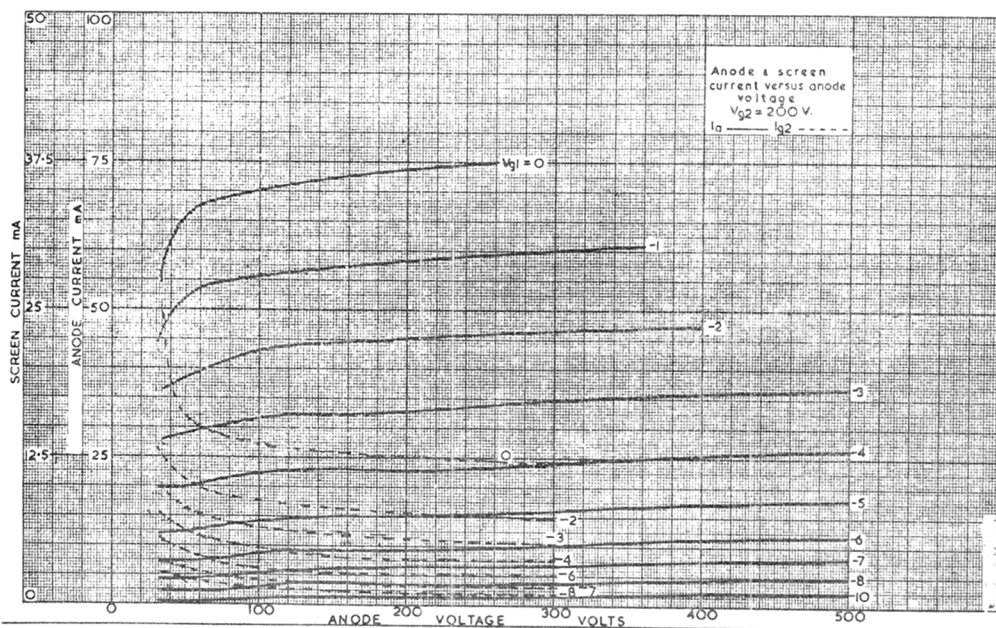
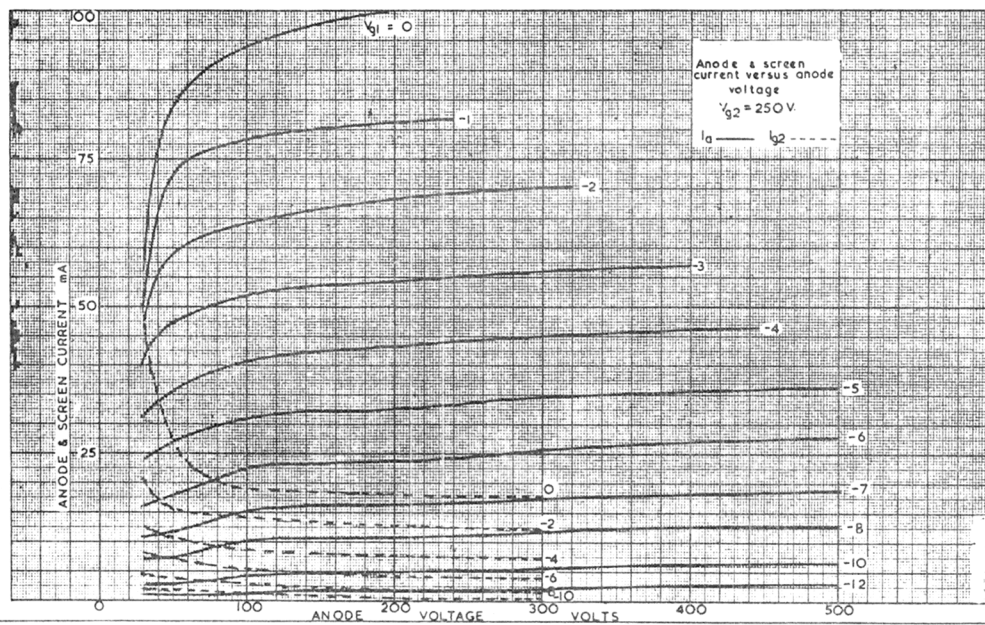
As a Cathode Follower, when triode connected, the output impedance varies between 60 and 70 depending on the value of cathode resistor employed. With a 250 volt HT supply the cathode resistor should not be less than 100 ohms.

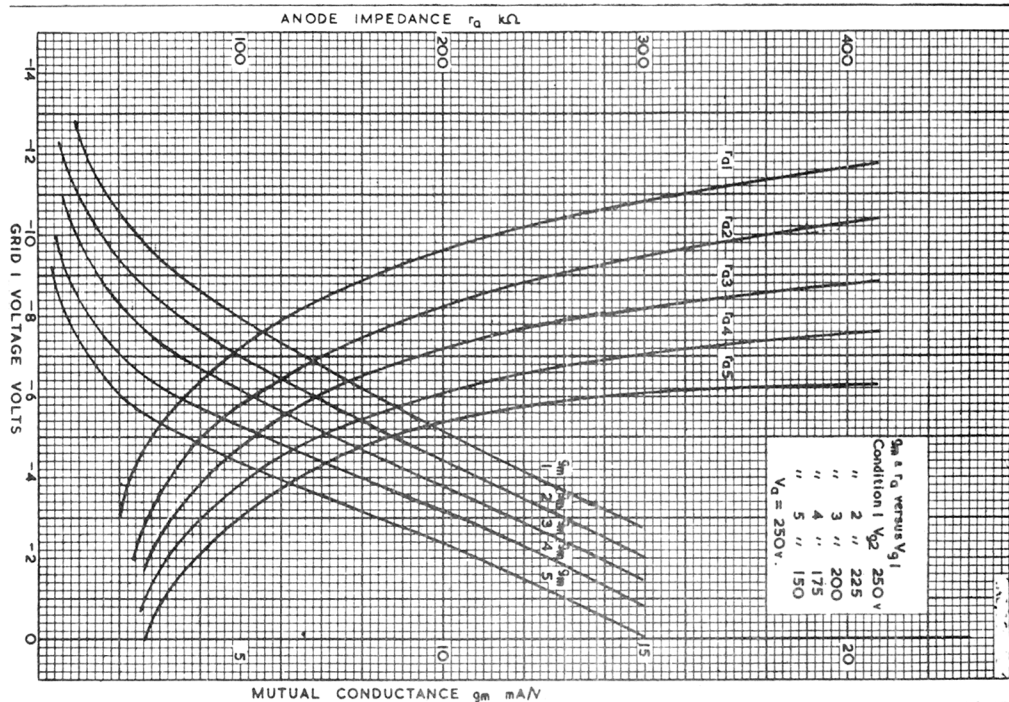
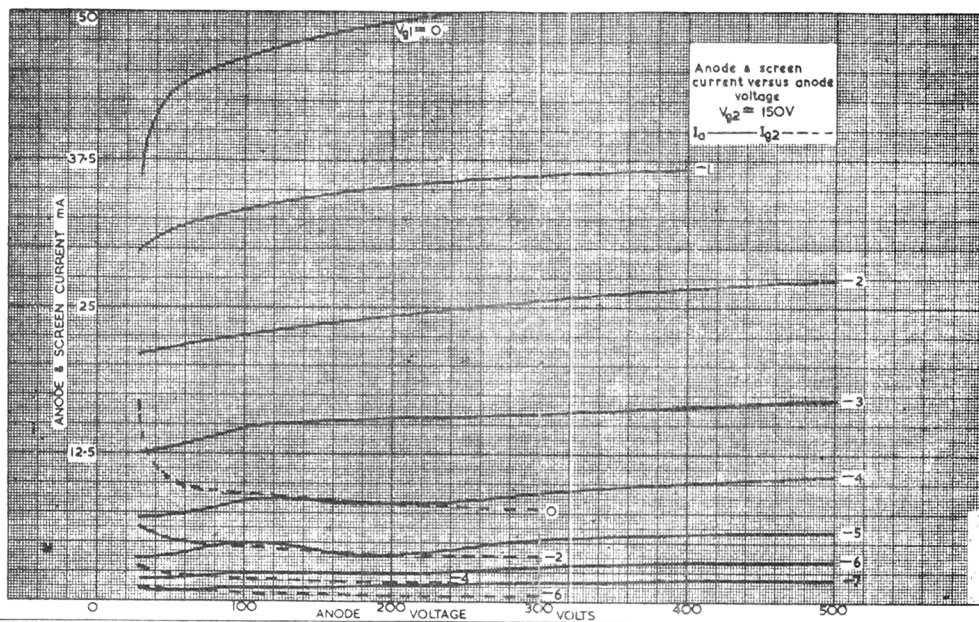
The control grid is not designed to withstand any appreciable dissipation, therefore, normally, no positive DC grid current should be allowed to flow. If the valve is to be used as a pulse modulator or similar application care must be taken not to exceed the maximum ratings and particular care must be taken of the grid dissipation.

Mounting Position - Any

DATA SHEET

C V 2127





DATA SHEET

CV 2127

