

MINISTRY OF SUPPLY D.L.R.D.(A)/RAE

Specification MOSA/CV2179 Issue 5 Dated 18.1.55 To be read in conjunction with BS448 BS1409 and K1001	<u>SECURITY</u>	
	<u>Specification</u> UNCLASSIFIED	<u>Valve</u> UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - Low Impedance Pentode			<u>MARKING</u>		
CATHODE - Indirectly Heated			See K.1001/4		
ENVELOPE - Glass, unmetallised			<u>BASE</u>		
PROTOTYPE - E.2134			B.S.448/B7G		
<u>RATING</u>			<u>CONNECTIONS</u>		
			Pin	Electrode	
<u>Pentode Connection</u>					
Heater Voltage	(V)	6.3	1	g1	
Heater Current	(A)	0.635	2	k + g3	
Max. Anode Voltage, (Ia = 0)	(V)	500	3	h	
Max. Screen Voltage	(V)	300	4	h	
Max. Anode Dissipation	(W)	9	5	a	
Max. Screen Dissipation	(W)	3	6	IC	
Max. h-k Voltage	(V)	150	7	g2	
Mutual Conductance	(mA/V)	9.5		A	
Amplification Factor		220		A	
Anode Impedance	(k Ω)	23		A	
<u>Triode Connection</u>					
Max. Anode + Screen Voltage	(V)	300		B	
Max. Anode + Screen Dissipation	(W)	12.0		B	
Mutual Conductance	(mA/V)	12		B	
Amplification Factor		10		B	
Anode Impedance	(Ω)	835		B	
<u>CAPACITANCES (pF)</u>					
C in (Nom.)		10.0		C	
C out (Nom.)		8.5		C	
Ca, g1 (Max.)		0.5		C	
			<u>DIMENSIONS</u>		
			See B.S.448/B7G/2.1 Size Ref. No.5		
			Dimensions (mm)	Min.	Max.
			A seated height	-	63.5
			C diameter	-	19.0
			D overall length	-	70.5
			<u>MOUNTING POSITION</u>		
			Any		

NOTES

- A. Measured at $V_a = 165$; $V_{g2} = 165$; $I_a = 55$ mA.
- B. Measured at $V_a + V_{g2} = 165$; $I_k = 65$ mA.
- C. Measured without close fitting metal shield.

TESTS

To be performed in addition to those applicable in K1001

Test Conditions				Test	Limits		No. Tested	Note			
					Min.	Max.					
See K1001/AIII				<u>CAPACITANCE (pF)</u>							
Links to H.P.	Links to L.P.	Links to E									
1	2,3,4, 6,7,8	5,9,10, TC1, TC2	C in						9	11	6
5	2,3,4, 6,7,8	1,9,10, TC1, TC2	C out						7.5	9.5	per
5	1	2,3,4,6,7, 8,9,10, TC1, TC2	Ca, g1	-	0.5	week	1				
	Vh	Va	Vg2	Ia(mA)							
b	6.3	0	0	0	Ih (A)	0.57	0.70	100% or S			
c	6.3	165	165	55	-Vg1 (V)	6	12	100%			
d	6.3	165	165	55	Reverse Ig1 (μA)	-	1.5	100%			
e	6.3	165	165	55	gm (mA/V)	7	12	100%			
f	6.3	165	165	55	Ig2 (mA)	7.75	11	100%			
g	6.3	165	165	30μA.	-Vg1 (V)	-	40	100%			
h	6.3	Va+Vg2+Vg1 strapped		120	Emission Test D.C.Voltage (V)	-	20	100%			
j	6.3	165	-	55	Inner μ	7.5	12.5	5 per week			
Vg1 reduced by 1 volt from value in Test. C. Vg2 raised from 165V. to maintain Ia = 55 mA.											

NOTES

1. Measured without close fitting metal shield

DATA SHEET

Valve Electronic Type **CV2179**

TYPICAL OPERATING CONDITIONS

SINGLE VALVE. CLASS A AUDIO AMPLIFIER

PENTODE CONNECTION

% full input	45	100	100	75	50	%
V _a	100	150	165	165	165	Volts
V _{g2}	100	150	165	165	165	Volts
V _{g1} no sig ^x	-4.6	-7.8	-9.3	-10	-11.4	Volts
R _k	100	120	150	220	330	Ohms
I _a no sig	39	56	53	40	29	mA
I _{g2} no sig	6.5	9.5	9.0	7.2	5.4	mA
v _{in} pk	5	7.0	8.5	6.7	4.7	Volts
R _a	2500	3000	3000	4000	6000	Ohms
P _{out}	1.45	3.5	4.1	2.84	2.3	Watts
D	8.6	11	10	10	10	%

The conditions given in the last two columns are those obtained when the valve is over-biased. They are useful where HT power is limited and reduced power output can be tolerated.

TWO VALVES. CLASS AB1 PUSH-PULL AUDIO AMPLIFIER

PENTODE CONNECTION

All data per pair unless otherwise stated

V _a	100	165	200	250	Volts
V _{g2}	100	165	165	165	Volts
V _{g1} no sig ^x	-5	-11.9	-10	-11.2	Volts
R _k per valve	120	150	200	300	Ohms
I _a no sig	70	107	87	66	mA
I _a max sig	73	110	100	80	mA
I _{g2} no sig	12	18	14	10	mA
I _{g2} max sig	15	36	25	24	mA
v _{in} pk (g1-g1)	11.0	20	25	30	Volts
R _{a-a}	3000	3000	4500	7500	Ohms
P _{out}	2.25	9.0	11.5	13.3	Watts
D	3.3	4.6	4.0	4.5	%

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Valve Electronic Type **CV 2179**

TYPICAL OPERATING CONDITIONS

TWO VALVES. CLASS AB1 PUSH-FULL AUDIO AMPLIFIER
TRIODE CONNECTION

Data per pair unless otherwise stated

$V_a + g_2$	165	Volts
V_{g1} no sig [*]	-10.5	Volts
R_k per valve	330	Ohms
$I_a + g_2$ no sig	65	mA
$I_a + g_2$ max sig	74	mA
V_{in} pk (g_1-g_1)	24	Volts
$R_a - a$	3000	Ohms
P_{out}	2.6	Watts
D	1.4	%

^{*}Approximate.GRID RESISTOR

The maximum permissible DC resistance from control grid to cathode is limited to 0.25 Megohms for auto-bias and 0.1 Megohms for fixed bias applications.

CAPACITANCES (pF) Taken on a cold valve with no screening.

c_{a-all} 10 c_{gi-all} 10 c_{a-gi} 0.3

SCREENING No internal or external screening is fitted to the valve.

MOUNTING Any position.

It is recommended that the valve pins are aligned in a pin straightener of accredited design before inserting in a valve socket.

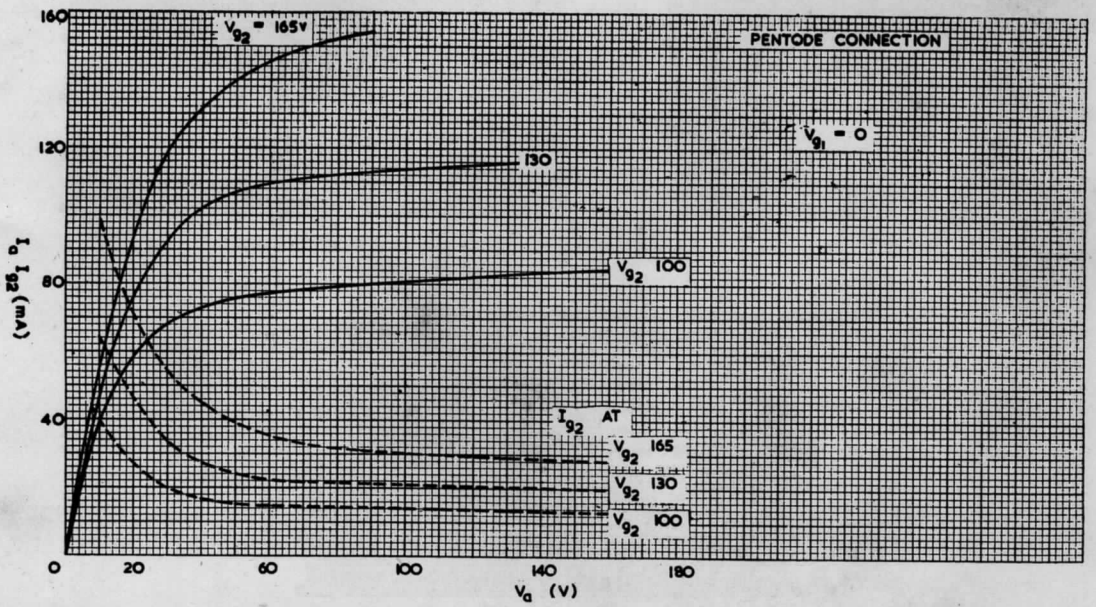
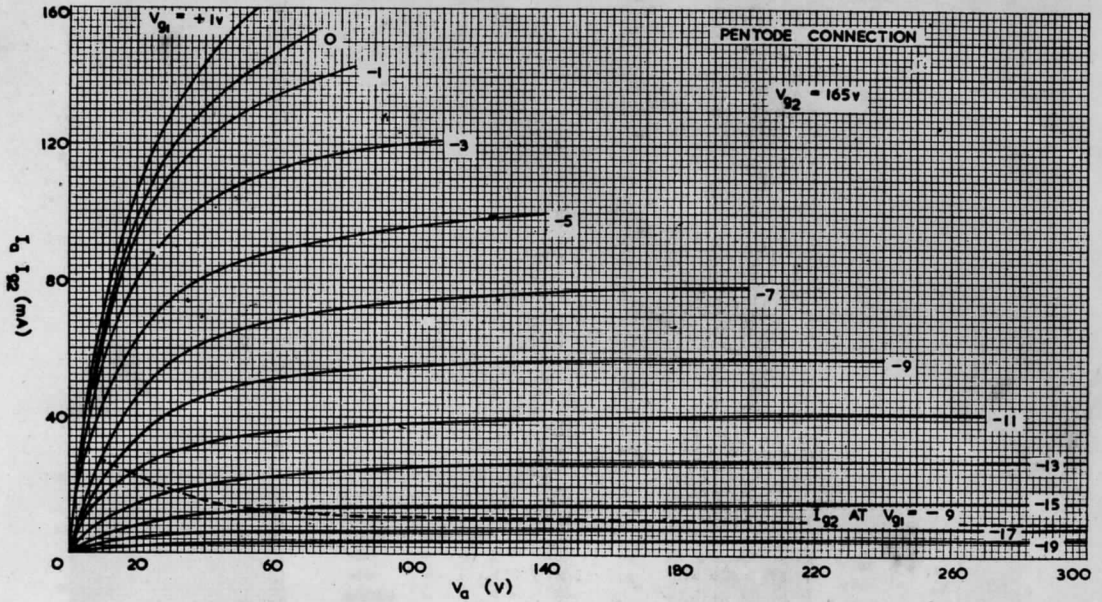
RETAINING The use of a retaining device is recommended.

VENTILATION Free air circulation around the bulb is preferable. If a retaining device in the form of a canister is used the surface should be blackened. The temperature of the hottest part of the bulb must not exceed 250°C.

MICROPHONY This type is free from microphony in normal receiver application.

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DATA SHEET

