

Specification MOS/ CV.2382 Issue 1. dated 10-1-57 To be read in conjunction with K1001	<u>SECURITY</u>	
	<u>Specification</u> Unclassified	<u>Valve</u> Unclassified

TYPE OF VALVE:- Video Output Pentode CATHODE:- Indirectly heated ENVELOPE:- Glass-unmetallised PROTOTYPE:- VX8166C	<u>MARKING</u> See K1001/4
---	-------------------------------

RATING		Note	<u>BASE</u> B9A	
Heater Voltage (V)	6.3	A	<u>CONNECTIONS</u>	
Heater Current (A)	0.75		Pin	Electrode
Max. Anode Voltage (at $I_a = 0$) (V)	550		1	Internally connected
Max. Screen Voltage (at $I_{g2} = 0$) (V)	550		2	Control grid
Max. Operating Anode Voltage (V)	300		3	Cathode
Max. Operating Screen Voltage (V)	250		4	Heater
Max. Cathode Current (mA)	70		5	Heater
Max. Anode Dissipation (W)	12		6	Not connected
Max. Screen Dissipation (W)	3		7	Anode
Mutual Conductance (mA/V)	13		8	Screen grid
Amplification Factor ($g_1 - g_2$)	23		9	Suppressor grid
Max. Cathode Heater Voltage (V)	150		<u>DIMENSIONS</u>	
CAPACITANCES (pF)			Dimensions	Min. Max.
C_{ge} (nom.)	12.1		Overall length (mm)	- 78.5
C_{ae} (nom.)	5.9		Diameter (mm)	- 22.2
C_{ag} (max.)	0.1			

NOTES

- A. Measured at $V_a = 250$, $V_{g2} = 150$, $I_a = 40$ mA, $V_{g1} = -2.5$ approximately.

To be performed in addition to those applicable in K1001

	Test Conditions					Test	Limits		No. Tested	Note
							Min.	Max.		
a	See K1001/A111									
	Pins to H.P.	Pins to L.P.	Pins to E							
	7	2	1,3,4,5,6 8,9			Cag (pF)		0.1	Insp. level IC AQL 6.5	4
	2	1,3,4,5,6 8,9.	7			Cge (pF)	10.7	13.5		
	7	1,3,4,5,6 8,9.	2			Cae (pF)	5.5	6.3		
b	Vh (V)	Vg1 (V)	Vg2 (V)	Vg3 (V)	Va (V)					
	6.3	-	-	-	-	Ih (A)	0.7	0.8	Insp. level IA AQL 2.5	4
c	6.3	-2.5	150	0	250	Ia (mA)	30	50	100%	
d	6.3	-18	150	0	250	Ia (uA)	-	10	100%	
e	6.3	-2.5	150	0	250	Gm (mA/V)	11.1	14.9	100%	
f	6.3	-	150	0	250	Ig2 (mA)	3.8	6.2	100%	1
g	6.3	-	150	0	250	Rev.Ig (uA)	-	1.0	100%	1
h	6.3					Ik peak (A)	1.5	-	Insp. level II AQL 1.0	2,4
j	6.3	adj.	150	0	250	Distortion (total) (%)		2.5	Insp. level IC AQL 6.5	3,4

NOTES

- Test carried out with cathode resistor of 56 ohms.
- Anode and grid strapped. Peak applied voltage = 70V., $T_p = 10$ usec. min., P.R.F. = 50 c/s.
- Test made with anode load of 4000 ohms, -Vg adjusted to give Ia = 45 mA. Signal (of frequency between 200 c/s and 2000 c/s) applied and amplitude adjusted to give output voltage across anode load of 45 volts peak (corresponding to a power of 250 mW). Total distortion is then measured.
- Use inspection tables from K1001, Appendix XI, but Normal Inspection Level only to apply.