

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																					
<u>RATING</u>		<u>BASE</u> B9A																					
Heater Voltage (V)	6.3	<u>CONNECTIONS</u>																					
Heater Current (A)	0.75																						
Max. Anode Voltage (at $I_a = 0$) (V)	550																						
Max. Screen Voltage (at $I_{g2} = 0$) (V)	550																						
Max. Operating Anode Voltage (V)	300																						
Max. Operating Screen Voltage (V)	250																						
Max. Cathode Current (mA)	70																						
Max. Anode Dissipation (W)	12																						
Max. Screen Dissipation (W)	3																						
Mutual Conductance (mA/V)	13			<u>DIMENSIONS</u>																			
Amplification Factor ($g_1 - g_2$)	23																						
Max. Cathode Heater Voltage (V)	150	<table border="1"> <thead> <tr> <th>Pin</th> <th>Electrode</th> </tr> </thead> <tbody> <tr><td>1</td><td>Internally connected</td></tr> <tr><td>2</td><td>Control grid</td></tr> <tr><td>3</td><td>Cathode</td></tr> <tr><td>4</td><td>Heater</td></tr> <tr><td>5</td><td>Heater</td></tr> <tr><td>6</td><td>Not connected</td></tr> <tr><td>7</td><td>Anode</td></tr> <tr><td>8</td><td>Screen grid</td></tr> <tr><td>9</td><td>Suppressor grid</td></tr> </tbody> </table>		Pin	Electrode	1	Internally connected	2	Control grid	3	Cathode	4	Heater	5	Heater	6	Not connected	7	Anode	8	Screen grid	9	Suppressor grid
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<u>CAPACITANCES (pF)</u>																							
C _{ge} (nom.)	12.1																						
C _{ae} (nom.)	5.9																						
C _{ag} (max.)	0.1																						
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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.		
	See K1001/A111									
	Pins to H.P.	Pins to L.P.	Pins to E							
a	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			Caε (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

1. Test carried out with cathode resistor of 56 ohms.
2. Anode and grid strapped. Peak applied voltage = 70V., $T_p = 10$ usec. min., P.R.F. = 50 c/s.
3. Test made with anode load of 4000 ohms, $-V_g$ adjusted to give $I_a = 45$ 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.
4. Use inspection tables from K1001, Appendix XI, but Normal Inspection Level only to apply.

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