

VALVE ELECTRONIC

CV445

GENERAL POST OFFICE: E-IN-C (W)

Specification: G.P.O./CV445/Issue 3 Dated: June, 1956 To be read in conjunction with K 1001	<u>SECURITY</u>	
	<u>Specification</u> Unclassified	<u>Valve</u> Unclassified

→ indicates a change

<u>TYPE OF VALVE:</u> Air Blast Cooled Pentode		<u>MARKING</u> See K1001/4	
<u>CATHODE:</u> Directly Heated. Thoriated Tungsten filament			
<u>ENVELOPE:</u> Copper/glass			
<u>PROTOTYPE</u> 5J/180E.			
<u>RATING</u>		<u>BASE</u> See drawing, page 3	
		<u>CONNECTIONS</u>	
		<u>Pin</u>	<u>Electrode</u>
Heater Voltage (V) 9.0		1	Grid 3
Heater Current (A) 30.0		2	Filament
Max.Direct Anode Voltage (kV) 6.0		3	Grid 2
Max.Direct Anode Current (A) 2.5		4	Filament
Max.Anode Dissipation (kW) 3.5		5	Grid 3
Max.Direct Screen Voltage (kV) 1.5		6	Grid 1
Max.Direct Screen Current (A) 0.25		-	Anode Clamp
Mutual Conductance (mA/V) 6.0		<u>DIMENSIONS</u> See drawing, page 3	
Screen Grid (u) 5.0			
Max.Freq.for above ratings 30 Mc/s			
<u>CAPACITANCES (pF)</u>		<u>PACKAGING</u> See K 1005	
C _{ag} 0.6			
C _{in} 32.0			
C _{out} 21.0			
<u>NOTES</u>			
A. Measured at V _a =6kV, V _{g2} =1.5kV, I _a =0.5A.			

To be performed in addition to those applicable in K 1001

	Test Conditions						Test	Limits		No. Tested	Note
	Vf (V)	Vg1 (V)	Vg2 (V)	Vg3 (V)	Va (kV)	Ia (mA)		Min	Max		
a	9.0	-	-	-	-	-	If (A)	27	33	100%	1
b	9.0	Ad-just	1500	0	6	500	-I _{g1} (uA)	-	25.0	100%	1,2
c	9.0	Record (Vg1A)	1500	0	6	500	Control Grid Voltage Vg1 (v)	-200	-320	100%	1
d	9.0	Ad-just	1500	0	6	500	I _{g2} (mA)	-	30	100%	1
e	9.0	2000	2000	2000	2.0		Peak Emission I _e (A)	12	-	100%	3
f	9.0	Set at Vg1A +25V	1500	0	6	Record Ia2	g _m (mA/V) $\frac{500-I_{a2}}{25}$	4.75	6.75	100%	1

NOTES

- For test 'a' and all subsequent tests the filament shall be heated by 50 c.p.s. current and the return of the grid and anode circuits shall be connected to the central point of the filament transformer secondary except in test 'e' (see note 3) G3 should also be connected directly to the point of common return for all tests except 'e'. Air flow 580 cubic feet/minute at a pressure drop of $2\frac{1}{2}$ inches water gauge.
- In test 'b', I_{g1} shall not exceed the value specified at the end of a 10 minute test and shall not be rising.
- In test 'e' the emission shall be measured by the discharge of a condenser charged to 2.0 kV and connected between the anode and all grids strapped and one end of the filament.

