

Specification MOSA./CV.2245 Issue 2 Dated 23.2.53 To be read in conjunction with K.1001	<u>SECURITY</u>	
	<u>Specification</u>	<u>Valve</u>
	UNCLASSIFIED	UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - Air Cooled V.H.F. Triode  CATHODE - Directly heated  ENVELOPE - Metal, Glass  PROTOTYPE - 3J/160E		<u>MARKING</u>  See K.1001/4.			
<u>RATING</u>		Note  A  B  B	<u>BASE AND CONNECTIONS</u>  See Drawing on Page 3.		
Filament Voltage (V) 10 Filament Current (A) 29 Max. Anode Voltage (kV) 3.0 Max. Anode Dissipation (kW) 1.0 Max. Anode Current (A) 2.2 Amplification Factor 19 Max. Grid Dissipation (W) 75 Anode Impedance (Ω) 1,300 Max. Operating Frequency (Mc/s) 120 Max. Emission (A) 10					<u>DIMENSIONS</u>
<u>CAPACITANCES (pF)</u>			Dimension	Min.	Max.
C <sub>ag</sub>	8.8		Overall Length (mm)	-	133
C <sub>ge</sub>	12.0		Diameter over Radiator (mm)	-	64.3
C <sub>ae</sub>	0.7		Bulb diameter	-	54
<u>NOTES</u>					
A. With forced air cooling of 80 cu. ft/min. at a pressure of 2 in. of water.					
B. Measured V <sub>a</sub> = 2.0 kV, I <sub>a</sub> = 0.5 A.					

To be performed in addition to those applicable in K.1001

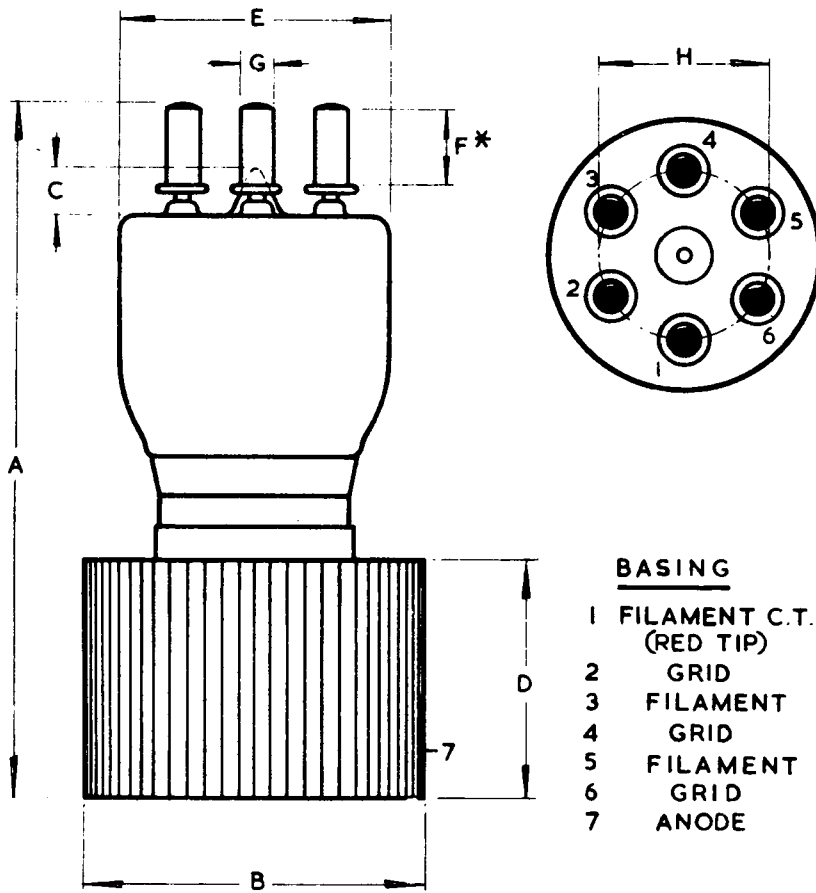
	Test Conditions				Test	Limits		No. Tested	Note
						Min.	Max.		
a					<u>Capacitances</u> (pF)				
					Cag	-	11		
					Cge	-	15		
					Gas	-	1.5		
b	Vf	Va(kV)	Vg1(V)	Ia (A)					
	10	-	-	-	If (A)	27.0	31.0	100% or 8	1
c	10	3.0	Adjust	0.5	Reverse Ig1 (μA)	-	25	100%	2
d	10	3.0	Adjust	0.5	Vg1 (V)	-65	-130	100%	2
e	10	2.0	-50	Record	gm (mA/V)	10	16	100%	
f	10	3.0	Adjust	Set as in(e)	μ	16	23	100% or 8	
g	10	1.0	1000	-	Peak Emission (A)	10	-	100%	3

NOTES

- For all tests with the exception of test (a), forced air cooling at a minimum of 100 cubic feet/minute, shall be applied to the anode radiator, prior to the application of any voltages to the electrodes.

The filament shall be heated by 50 c.p.s. current and the common return of grid and anode circuit shall be to the centre point of the filament transformer secondary, except as specified in test (g).

- The reverse current to the control grid shall not exceed the value specified at the end of a 10 minute test and shall not be rising.
- The emission shall be measured by the discharge of a condenser charged to 1 kV and connected between anode and grid strapped and one end of the filament.



**BASING**

- 1 FILAMENT C.T. (RED TIP)
- 2 GRID
- 3 FILAMENT
- 4 GRID
- 5 FILAMENT
- 6 GRID
- 7 ANODE

DIM.	MILLIMETRES	INCHES	DIM.	MILLIMETRES	INCHES
A	133 MAX.	5.2 MAX	E	54 MAX.	2 1/8 MAX.
B	64.3 MAX.	2 7/32 MAX.	F*	13.5 MIN.	17/32 MIN.
	62.7 MIN.	2 15/32 MIN.	G	6.40 ± 0.05	0.250 ± 0.002
C	17.5 MAX.	11/16 MAX.	H	31.8 APPROX.	1 1/4 APPROX.
D	44.45 NOM.	1.75 NOM.			

NOTE: BASIC FIGURES ARE INCHES

\* DENOTES: CONTACT LENGTH