

GENERAL POST OFF E: E-1N-C (W)

(POVT 187)

Specification: G.P.O./CV 1627/Issue 1 Date: 21.2.47 To be read in conjunction with K 1001	<u>SECURITY</u>	
	<u>Specification</u> Restricted	<u>Valve</u> Restricted

... indicates a change

<u>TYPE OF VALVE:</u> H.F. Pentode <u>CATHODE:</u> Directly heated <u>ENVELOPE:</u> Unmetallised glass <u>PROTOTYPE</u> 5D/100A		<u>MARKING</u> See K1001/4 Additional markings required (See Notes A & B) Serial No. Filament Volts 10.0																																	
<u>RATING</u>		<u>BASE</u>	<u>CONNECTIONS</u>																																
		See drawing on page 3	See drawing on page 3																																
		<u>DIMENSIONS</u>	<u>PACKING</u>																																
		See drawing on page 3	See K1001/7.3																																
<table border="1"> <thead> <tr> <th></th> <th></th> <th></th> <th>Note</th> </tr> </thead> <tbody> <tr> <td>Filament voltage</td> <td>(V)</td> <td>10.0</td> <td></td> </tr> <tr> <td>Nominal filament current</td> <td>(A)</td> <td>16.0</td> <td></td> </tr> <tr> <td>Max. anode voltage</td> <td>(kV)</td> <td>3.0</td> <td>C</td> </tr> <tr> <td>Max. screen voltage</td> <td>(V)</td> <td>850.0</td> <td>C</td> </tr> <tr> <td>Max. anode dissipation</td> <td>(kW)</td> <td>1.0</td> <td>C</td> </tr> <tr> <td>Mutual conductance</td> <td>(mA/V)</td> <td>4.5</td> <td>D</td> </tr> <tr> <td>Max. anode voltage at 20 Mc/s</td> <td>(kV)</td> <td>2.5</td> <td></td> </tr> </tbody> </table>					Note	Filament voltage	(V)	10.0		Nominal filament current	(A)	16.0		Max. anode voltage	(kV)	3.0	C	Max. screen voltage	(V)	850.0	C	Max. anode dissipation	(kW)	1.0	C	Mutual conductance	(mA/V)	4.5	D	Max. anode voltage at 20 Mc/s	(kV)	2.5			
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NOTES

- A. The Serial Numbers will be allotted by the Inspecting Officer
- B. It is not essential that the additional markings shall appear within the frame
- C. The maximum frequency of operation for these ratings is 10 Mc/s
- D. Measured with $V_a = 3000$, $V_{g2} = 800$, $V_{g3} = 0$, and $V_{g1} = -21V$ (A.C. filament) or $-16V$ (D.C. filament).

TESTS

The tests shown in Table I, or alternatively, those shown in Table II, shall be performed in addition to those applicable in K1001

Table I (for A.C. filament heating)

	TEST CONDITIONS						TEST	LIMITS		No. Tested	Note
	Vf(V)	Va(kV)	Vg1(V)	Vg2(V)	Vg3(V)	Ia(mA)		Min.	Max.		
(a)	10	-	-	-	-	-	If (A)	15.1	16.7	100%	
(b)	10	2	2000	2000	2000	-	Ic(Peak) (A)	7.5	-	100%	1
(c)	10	3	-16	Adjust	0	333	Reverse Ig (μ A)	-	20.0	100%	2
(d)	10	3	-16	800	0	Read	Ia (mA)	260	340	100%	
(e)	10	3	-16	800	0	-	Ig2 (mA)	-	30.0	100%	
(f)	10	3	-16	800	0	Read	gm (mA/V)	3.8	5.2	100%	
			-26			Read					
(g)	10	3	-16	800	-300	Read	Ia (mA)	-	240	100%	

Table II (for D.C. filament heating)

	TEST CONDITIONS						TEST	LIMITS		No. Tested	Note
	Vf(V)	Va(kV)	Vg1(V)	Vg2(V)	Vg3(V)	Ia(mA)		Min.	Max.		
(a)	10	-	-	-	-	-	If (A)	15.1	16.7	100%	
(b)	10	2	2000	2000	2000	-	Ic(Peak) (A)	7.5	-	100%	1
(c)	10	3	-11	Adjust	0	333	Reverse Ig (μ A)	-	20.0	100%	2
(d)	10	3	-11	800	0	Read	Ia (mA)	260	340	100%	
(e)	10	3	-11	800	0	-	Ig2 (mA)	-	30.0	100%	
(f)	10	3	-11	800	0	Read	gm (mA/V)	3.8	5.2	100%	
			-21			Read					
(g)	10	3	-11	800	-300	Read	Ia (mA)	-	240	100%	

NOTES

- The test shall be performed in accordance with K1001/AV
- The duration of test (c) shall be 15 minutes and the reverse grid current shall not be rising at the end of the test.

OUTLINE DRAWING

