

CV5724

MINISTRY OF AVIATION DLRD/RAE

Specification MOA/CV.5724 Issue No. 1 Dated 6.12.61 To be read in conjunction with K1001	<u>SECURITY</u> Specification UNCLASSIFIED Valve UNCLASSIFIED
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TYPE OF VALVE:- Beam Deflection Tube CATHODE :- Indirectly Heated ENVELOPE :- Glass PROTOTYPE :- E80T		<u>MARKING</u> See K1001/4	
<u>RATINGS</u> (All limiting values are absolute)		<u>BASE</u> BS.448/B9A/1.1	
<u>CONNECTIONS</u>			
Heater Volts (V) 6.3 Heater Current (A) 0.15 Max. Anode Voltage (Ia = 0) (V) 600 Max. Operating Anode Voltage (V) 330 Max. Grid 3 and Grid 4 Voltage (Ig3 & 4 = 0) (V) 600 Max. Operating Grid 3 and Grid 4 Voltage (V) 330 Max. Screen Grid Voltage (Ig2 = 0) (V) 330 Max. Operating Screen Grid Voltage (V) 100 Max. Deflector 1 Peak Voltage (Vpk) 970 Max. Deflector 1 Negative Peak Voltage (Vpk) 800 Max. Deflector 1 Operating Voltage (V) 170 Max. Deflector 2 Peak Voltage (Vpk) 670 Max. Deflector 2 Negative Peak Voltage (Vpk) 500 Max. Deflector 2 Operating Voltage (V) 170 Max. Heater-Cathode Voltage (V) 50 Max. Cathode Current (mA) 5.5	Pin 1 2 3 4 5 6 7 8 9 TC.	Electrode Beam Forming Plates Control Grid Cathode and Suppressor Grid Heater Heater Beam Forming Plate Deflector 1 Internal Connection Deflector 2 Anode	g3 + g4 g1 k, g5 h h g2 d' IC d'' a
<u>DIMENSIONS</u> BS.448/B9A/2.2 Size Ref. No. 3			
<u>CAPACITANCES</u> (pF)		Dimensions	Min. Max.
Cg1 - all (nom.) Cd' - all (nom.) Cd'' - all (nom.) Ca - all (max.) Ca - d' (max.) Ca - d'' (max.)	2.2 3.0 3.0 2.0 0.03 0.03	'A' Seated Height 'C' Diameter 'D' Overall Length	57.2 66.7 19.0 22.2 - 73.8
<u>NOTES</u>			
A. Functionally Pins 1, 2 and 6 are the Accelerating, Focussing and Gating electrodes respectively.			
B. The Joint Services Catalogue Number is 5960-99-037-2554.			

(40842)

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To be performed in addition to those applicable in K1001

TEST CONDITIONS:- Unless otherwise stated:-								
Vh (V)	Va (V)	Vg2 (V)	Vg3 + g4 (V)	Vg1 (V)	Vd' (V)			
6.3	100	70	250	0	120			
K1001 Ref.	TEST	TEST CONDITIONS	AQL	INSP. LEVEL	SYMBOL	LIMITS		UNIT
						Min.	Max.	
GROUP A								
	Electrode Insulation	Vh = 6.3V excluding Va - all (g1) = -300V Vg1 - all = -100 V.	-	100%	R	50	-	M
			-	100%	R	50	-	M
	Heater Cathode Leakage Current	Vhk = + 100 V. Note 1	-	100%	Ihk	-	25	μA
	Heater Current	Vh = 6.3V	-	100%	Ih	135	165	mA
	Reverse Grid Current	Vg1 = -2V. Vd' = 120V	-	100%	Ig1	-	0.5	μA
	Anode Current (1)	Adjust Vd' for maximum anode current.	-	100%	Ia(1)	0.9	1.8	mA
	Deflector " Volts	As in Anode Current (1) test	-	100%	Vd"	115	125	V
	Anode Current (2)	As in Anode Current (1) test	-	100%	Ia(2)	0.25	-	mA
		(a) Vd' = 114V	-	100%	Ia(2)	0.25	-	mA
		(b) Vd' = 126V	-	100%	Ia(2)	-	0.25	mA
		(c) Vd' = 111V	-	100%	Ia(2)	-	0.25	mA
		(d) Vd' = 129V	-	100%	Ia(2)	-	0.25	mA
	Anode Current (3)	(a) Vd' = 160V	-	100%	Ia(3)	-	10	μA
		(b) Vd' = 80V	-	100%	Ia(3)	-	10	μA
		(c) Vd' As in Anode Current (1) Vg1 = -20V	-	100%	Ia(3)	-	50	μA
		(d) Vd' As in Anode Current (1) Vg2 = 0	-	100%	Ia(3)	-	50	μA
	Cathode Current	Va = 65V, Vg2 = 0, Vg3 + g4 = 150V, Vg1 = 0, Vd' = Vd" = 150V Rk = 180 Ohms.	-	100%	Ik	60	120	μA
GROUP B								
A VI/ 5.1	Stability Life Test (2 hours)	As for Group A Cathode Current	1.0	I	ΔIk (Indivi- dual)	-	5.0	%
A III	Capacitances	To be performed in a 1 Mc/s R.F. Bridge with valve mounted in a fully shielded socket. Valve unscreened. Note 2	6.5	II I	-	-	-	-
					Cg1-all	-	3.5	pF
					Cd'-all	-	4.5	pF
					Cd"-all	-	4.5	pF
					Ca-all	-	2.0	pF
					Ca-d'	-	0.03	pF
					Ca-d"	-	0.03	pF

Amend 1.

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NOTES

1. Protective Resistance of 1 M Ω .
2. The Capacitance connections shall be :-

Capacitance	Connections		
	H.P.	L.P.	Earth
Cg1 - all	2	1 3 4 5 6 7 8 9 TC	-
Cd' - all	7	1 2 3 4 5 6 8 9 TC	-
Cd" - all	9	1 2 3 4 5 6 7 8 TC	-
Ca - all	TC	1 2 3 4 5 6 7 8 9	-
Ca - d'	TC	7	1 2 3 4 5 6 8 9
Ca - d"	TC	9	1 2 3 4 5 6 7 8

ELECTRONIC VALVE SPECIFICATIONS

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AMENDMENT NO.1

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GROUP A Anode Current (3) test

In the column headed 'Test Conditions' against sub-clause (d)
add 'Vg2 = 0'

GROUP B Capacitances

In the column headed Inspection Level amend 'IE' to read 'IC'

February, 1964
N.222034

T.V.C. for R.A.E.

JAS
28/6/64