

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION GPO/CV3998

ISSUE 1. DATED SEPTEMBER 1957

AMENDMENT NO. 1

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Test a

Change Inspection Level from II to 1C.

January, 1962.
(8807)

General Post Office(s).

VALVE ELECTRONIC **CV3998**

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

Specification: GFO/CV3998/Issue I Dated: Sept. 1957 To be read in conjunction with K 1001, BS448 and BS1409	<u>SECURITY</u>	
	<u>Specification</u>	<u>Valve</u>
	Unclassified	Unclassified

→ indicates a change

<u>TYPE OF VALVE:</u> Wideband amplifier pentode <u>CATHODE:</u> Indirectly heated <u>ENVELOPE:</u> Glass unmetallised <u>PROTOTYPE:</u> E180F, 5A/170K		<u>MARKING</u> See K1001/4.																					
<u>RATING</u>		Note	<u>BASE</u> BS 448/B9A																				
Heater voltage (V)	6.3		<u>CONNEXIONS</u> <table border="1"> <thead> <tr> <th>Pin</th> <th>Electrode</th> </tr> </thead> <tbody> <tr><td>1</td><td>k</td></tr> <tr><td>2</td><td>g1</td></tr> <tr><td>3</td><td>k</td></tr> <tr><td>4</td><td>h</td></tr> <tr><td>5</td><td>h</td></tr> <tr><td>6</td><td>IC</td></tr> <tr><td>7</td><td>a</td></tr> <tr><td>8</td><td>g3,s</td></tr> <tr><td>9</td><td>g2</td></tr> </tbody> </table>	Pin	Electrode	1	k	2	g1	3	k	4	h	5	h	6	IC	7	a	8	g3,s	9	g2
Pin	Electrode																						
1	k																						
2	g1																						
3	k																						
4	h																						
5	h																						
6	IC																						
7	a																						
8	g3,s																						
9	g2																						
Heater current (A)	0.3																						
Max. anode voltage (Ia=0) (V)	400	A																					
Max. operating anode voltage (V)	210	A																					
Max. anode dissipation (W)	3	A																					
Max. screen voltage (Ig2=0) (V)	400	A																					
Max. operating screen voltage (V)	175	A																					
Max. screen dissipation (W)	0.9	A																					
Max. control grid negative voltage (V)	50	A																					
Max. control grid negative voltage peak (V)	100	A																					
Max. cathode current (mA)	25	A																					
Max. grid-cathode resistor (autobias conditions) (MΩ)	0.5	A																					
Max. grid-cathode resistor (fixed bias conditions) (MΩ)	0.25	A																					
Max. cathode-heater voltage (V)	60	A																					
Max. cathode-heater resistor (KΩ)	20	A,D																					
Max. bulb temperature (°C)	155	A																					
Mutual conductance (mA/V)	16.5	B																					
<u>CAPACITANCES</u>			<u>DIMENSIONS</u> See BS 448/B9A/2.1 Size Ref. 1.																				
C ag1 (max.) (pF)	0.03	C	Dimension (m.m) Min. Max.																				
C in	7.9	C	A Seated height - 38.0																				
C out	2.9	C	C Diameter 19.0 22.2																				
			D Overall length - 45.0																				
Notes: A. Absolute maximum values. B. With Va=180V, Vg2=150V, Ia=13 mA (restrict RKF to values of C. Measured with external shield. D. In the interests of operation it is advisable to use a resistor of 20K ohms.)																							

TESTS

To be performed in addition to those applicable in K1001

Test Conditions								Test	Limits		AQL	INSP. LEVEL	NOTE
									Min.	Max.			
a	Links to H.P.	Links to L.P.			Links to E			C out (pF)	2.5	3.3	2.5	II	1,
	7	1,3,4,5,6,8,9			2								
	2	1,3,4,5,6,8,9			7								
	2	7			1,3,4,5,6,8,9			C ag1 (pF)	-	0.05			
	Vh (V)	Va (V)	Vg2 (V)	Vg1 (V)	Vg3 (V)	Vhk (V)	Rk (ohms)	Ih (mA)	285	315	0.65	II	
b	6.3												
c	6.3					60		Heater - (µA) cathode leakage current.	-	15.0	2.5	II	
d	6.3	190	160	-4.7	0			Ia (mA)	-	0.8		100%	
e	6.3	190	160	+9	0		630	Ig2 (mA)	2.6	3.7		100%	
f	6.3	190	160	+9	0		630	Ia (mA)	12.2	13.8		100%	
g	6.3	190	160	+9	0		630	-Ig1 (µA)	-	0.5		100%	
h	6.3	190	160	+9	0		630	gm (mA/V)	14.2	18.8		100%	2,

NOTES. 1. Measured with an external shield.
 2. Measuring signal on g1 not to exceed 100 mV r.m.s. with the cathode resistor suitably by-passed.