VALVE ELECTRONIC CV3998

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

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

——> indicates a change

TYPE OF VALVE: Wideband amplifier pentode
CATHODE: Indirectly heated
ENVELOPE: Glass unmetallised
PROTOTYPE: E180F, 5A/170K

MARKING
See K1001/4.

RATING			Note
Heater voltage	(V)	6.3	
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
CAPACITANCES			
C ag1 (max.)	(pF)	0.03	C
C in		7.9	C
C out		2.9	C

BASE
BS 448/B9A

CONNEXIONS

Pin	Electrode
1	k
2	g1
3	k
4	h
5	h
6	IC
7	a
8	g3,s
9	g2

DIMENSIONS
See BS 448/B9A/2.1
Size Ref. 1.

Dimension (m.m)		Min.	Max.
A	Seated height	-	38.0
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
C. Measured with external shield.
D. In the interests of stable operation it is advisable to (restrict RKf to values of under 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							
	7		1,3,4,5,6,8,9			2		C out (pF)	2.5	3.3			
	2		1,3,4,5,6,8,9			7		C in (pF)	~~7.3~~ 6.6	8.5	2.5	I ~~II~~	1,
	2		7			1,3,4,5,6,8,9		C ag1 (pF)	-	0.03			
	Vh (V)	Va (V)	Vg2 (V)	Vg1 (V)	Vg3 (V)	Vhk (V)	Rk (ohms)						
b	6.3							Ih (mA)	285	315	0.65	II	
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.

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION GPO/CV3998

ISSUE 1. DATED SEPTEMBER 1957

AMENDMENT NO. 1

Page 2

Test a

Change Inspection Level from II to 1C.

21.3.62

January, 1962.

General Post Office(s).

(8807)

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION GPO/CV3998 ISSUE 1 DATED SEPTEMBER 1957

AMENDMENT No. 2

Page 2 Test Clause (a) "C in"

Delete Min. "7.3" and

Substitute "6.6"

September 1965

T.V.C. for G.P.O

SM.319508

15/4/66