VALVE ELECTRONIC **CV6123**

Specification - MOA/CV 6123
Issue 1 dated 6th June, 1963
To be read in conjunction with K.1001, B.S.448 and B.S.1409

SECURITY	
Specification	Valve
Unclassified	Unclassified

TYPE OF VALVE - Beam Power Amplifier
CATHODE - Directly Heated - Quick Heating
ENVELOPE - Glass
PROTOTYPE - QZ06-20

MARKING
See K1001/4

BASE
BS.448/B8-0

TOP CAP
BS.448/CT2

RATINGS
All limiting values are absolute

			NOTES
Filament Voltage	(V)	1.6	
Filament Current	(A)	3.25	
Max. Anode Voltage (f=60 Mc/s)	(V)	650	
Max. Anode Voltage (f=175Mc/s)	(V)	350	
Max. Screen Voltage	(V)	200	
Max. Anode Dissipation	(W)	25	
Max. Screen Dissipation	(W)	5	
Max. Cathode Current	(mA)	170	
Max. Bulb Temperature	(°C)	220	
Max. Operating Frequency	(Mc/s)	175	
See Note C below			

CONNECTIONS
ELECTRODE

PIN	
1	Filament, Beamplate
2	Filament
3	Screen Grid
4	Filament, Beamplate
5	Control Grid
6	Filament, Beamplate
7	Filament
8	Base Ring
TC	Anode

CAPACITANCES (pF)

			NOTES
Cag	(max)	0.22	A
Cin	(nom)	13.5	A
Cout	(nom)	9.0	A

DIMENSIONS (mm)

	Min	Max
Seated Height	-	83
Diameter	-	44
Overall Length	-	97

MOUNTING POSITION
Any
NOTE B

NOTES

A. Measured without a shield
B. When the valve is mounted with its main axis deviating from the vertical it is recommended that Pins 3 and 7 be placed in a vertical plane.
C. These ratings are for intermittent service
D. Joint Services Catalogue Number: 5960/99/037/3395

CV6123

TESTS

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

Test conditions unless otherwise specified:-

Vf	Va	Vg2	Vg1	Ia(mA)
1.6	300	200	-	80

K1001 Ref	Test	Test Conditions	AQL %	Insp Level	Sym	Limits Min	Limits Max	Units
	GROUP A							
	Electrode Insulation	Vf = 0						
		Vg1 - all = 300V		100%	R	30	-	MΩ
		Vg2 - all = 300V		100%	R	30	-	MΩ
		Va - all = 300V Note 1		100%	R	30	-	MΩ
	Reverse Grid Current			100%	Ig1	-	5	µA
	GROUP B							
	Filament Current		0.65	II	If	3.0	3.5	A
	Anode Current (1)	Vg1 = -10 Note 2	0.65	II	Ia	210	390	mA
	Anode Current (2)	Vg1 = -33	0.65	II	Ia	46	95	mA
	Anode Current (3)	Vg1 = -70	0.65	II	Ia	-	3	mA
	Screen Current		0.65	II	Ig2	-	8	mA
	GROUP C							
	Power Output	Notes 3 and 6	2.5	I	Pout	45	-	W
	Change in Power Output	Vf = 1.4 Note 3	2.5	I	Pout	-	10	%
	Filament Heating time	Notes 3 and 4	2.5	I	Pout	36	-	W
	GROUP D							
	Capacitances	Measured on 1 Mc/s bridge with valve mounted in a fully shielded socket. Valve unscreened.	6.5	IC	Cag		0.22	pF
					Cin	11.5	16.5	pF
					Cout	7.0	11.0	pF
	GROUP E Omitted							
	GROUP F							
	Life	Note 5		1 per month (min)		625	-	hours
		Life Test End-Point						
		1. Power Output Notes 3 and 6			Pout	41	-	W

CV6123

NOTES

1. 10 megohms protective resistance in series.

2. Pulse test.

3. Measure as oscillator or amplifier
   Va = 600V, Vg2 = 180V
   Ia = 112 mA (max), Ig1 = 1.8 - 3.0 mA, Ig2 = 27 mA (max)
   Rg1 = 30KΩ, Frequency = 15 Mc/s (min).

4. The time taken to reach the specified minimum power output shall not exceed 1 second.

5. Test as oscillator or amplifier. Frequency 15 Mc/s (min).
   Va = 400V, Vg2 = 200V
   Ia = 130 mA (max), Power Output 30W (min),
   Filament switched 4 minutes ON, 1 minute OFF.

6. Useful Power Output in load.