VALVE ELECTRONIC

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

CV2187

Specification: GPO/CV2187/Issue 1 Dated: JAN. 1954 To be read in conjunction with K 1001	SECURITY Specification: Unclassified Valve: Unclassified

⟶ indicates a change

TYPE OF VALVE: Reflex klystron	MARKING See K1001/4
CATHODE: Indirectly heated	
ENVELOPE: Copper-glass	BASE None. Connections made to flexible leads.
PROTOTYPE Z 239/1G	

RATING			Note
Heater voltage	(V)	6.3	B
Heater current	(A)	1.0	
Frequency range	(Mc/s)	3600 to 4200	
Resonator voltage (max.)	(V)	1100	
Reflector voltage (max.)	(V)	- 700	
Resonator current (max.)	(mA)	70	
Output power (min.)	(W)	1	
Bandwidth to half power	(Mc/s)	40 to 70	
Modulation sensitivity	(Mc/s/V)	0.5	
Modulation capacity	(pF)	3	

CONNECTIONS NOTE A

Lead	Electrode
1	Heater-Cathode
2	Heater
3	Heater-Cathode
TC	Reflector

TOP CAP
See K1001/A1/5.2

DIMENSIONS
See drawing on Page 3

NOTES.

A. Lead connections marked on side of base shell.
B. Cathode heating time, 60 secs.
C. Mounting, vertical with base up or down.
D. Air cooling required; 7 cu.ft/min. when operated with gun end uppermost, 5 cu.ft/min. with gun end down. The cooling air to be directed towards the gun end.
E. When switching on care should be taken to ensure that the reflector is never allowed to receive a positive bias.
F. The valve should normally be operated with the resonator earthed and the cathode negative.
G. Two heater-cathode leads are brought out from the valve so that one can be used as a separate d.c. return path to avoid hum.

To be performed in addition to those applicable in K 1001

Test Conditions						Test	Limits		No. Tested	Note
	Vh (V)	V ref. (V)	V res. (V)	I.res. (mA)	Mod.peak AC. (V)		Min.	Max.		
a	6.3	-	-	-	-	Heater current (A)	0.92	1.08	100%	1
b	6.6	-250	Adjust	64	-	V res. (V)	-	1100	100%	2,3
c	6.0	Adjust	Adjust	-		Oscillation at 3980 Mc/s			100%	2,3, 5
						I res. (mA)	-	64		
						V ref. (V)	-140	-260		
						V res. (V)	-	1100		
						Power output (mW)	800	-		
d	6.0	As in test c	As in testc	-	100	Oscillation at 3980 Mc/s Bandwidth to half power (Mc/s)	40	-	100%	2,3
e	6.0		As in testc	-	5	Oscillation at 3980 Mc/s Frequency variation (Mc/s)	4	-	100%	2,3,4
f	6.0	As in test c	As in testc	-	100	Frequency range 3850 to 4100 Mc/s Oscillation shall be detected over the range	-	-	100%	2,3

Notes. 1. The valve shall be pre-heated for 1 minute minimum.

2. These tests to be carried out in an approved circuit.

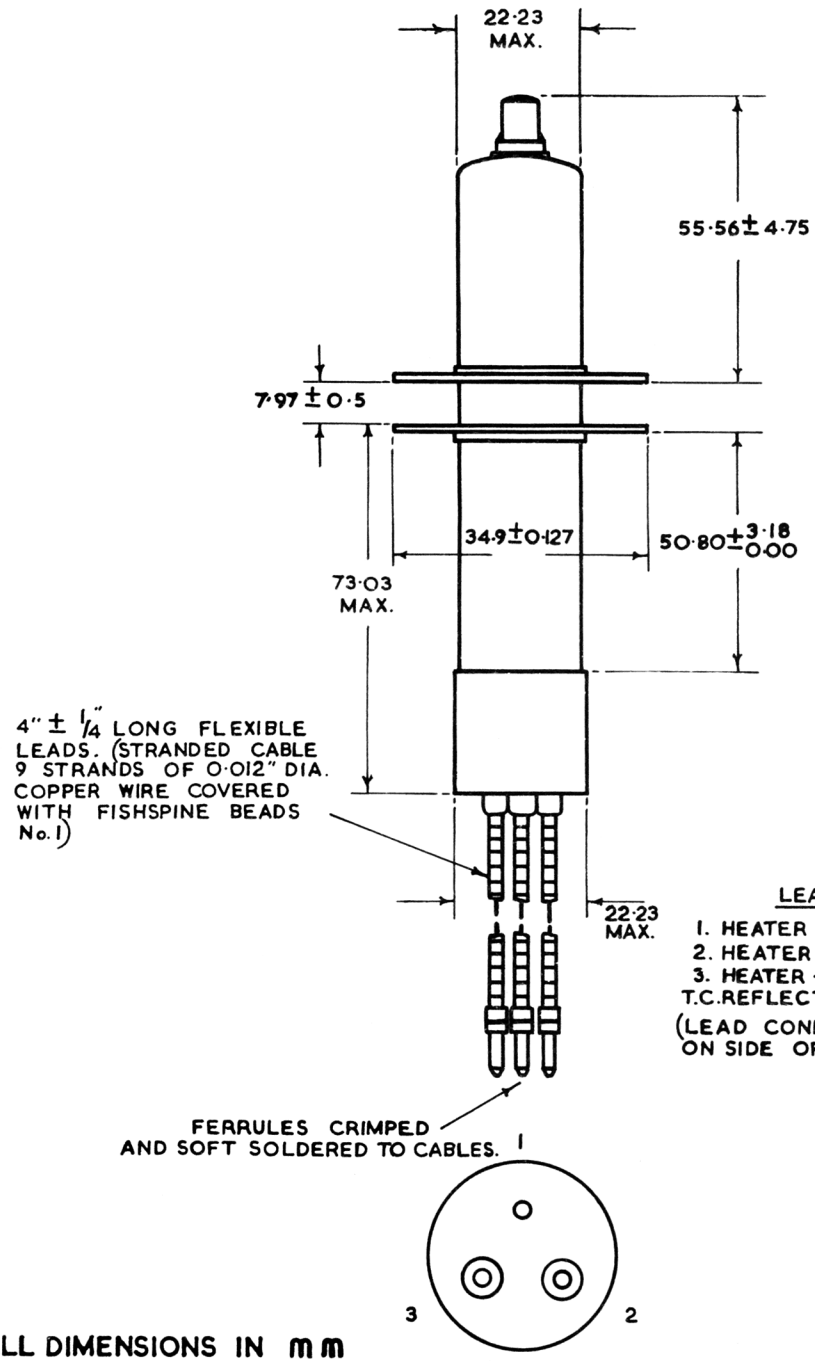
3. In these tests the valve shall be blown with a minimum air flow of 7 cu. ft/min.

4. The frequency variation shall be measured about a reflector voltage mid-way between the half-power D.C. voltages on the power curve. This point may be estimated visually.

5. The maximum value of the resonator current shall be increased above 64 mA specified, when the resonator voltage is less than 1100 volts as follows:-

Resonator volts	Resonator current
1100	64 mA
1050	67 mA
1000	70 mA

CV2187



ALL DIMENSIONS IN mm