

Specification MAP/CV67/Issue 5. Dated 14.1.49 To be read in conjunction with K1001 ignoring clauses:- 5.2.2., 5.8, 7.2.	<u>SECURITY</u>	
	<u>Specification</u> RESTRICTED	<u>Valve</u> UNCLASSIFIED

→ Indicates a change

UNCLASS

<u>TYPE OF VALVE</u> - Velocity Modulated Oscillator			<u>MARKING</u> See K1001/4		
<u>CATHODE</u> - Indirectly heated					
<u>ENVELOPE</u> - Glass-ummetallised			<u>PACKING</u> See K1005		
<u>RATING</u>			Note	<u>BASE</u> I.O.	
Heater Voltage	(V)	4.0		Pin	Electrode
Heater Current (max.)	(A)	1.60		1	Grid
Min. Oscillation Frequency	(Mc/s)	3226		2	Heater
Max. Oscillation Frequency	(Mc/s)	3370		3	No connection
Max. Resonator Dissipation	(W)	10.0		4	No connection
<u>AVERAGE WORKING CONDITIONS</u>				5	No connection
Resonator Voltage	(kV)	1.2	E	6	No connection
Reflector Voltage	(V)	-360	E	7	Heater
Grid Voltage	(V)	0		8	Cathode
Mean resonator dissipation	(W)	10.0	C	T.C.	Reflector
Min. Power Output	(mW)	100		The connection to the resonator is made by the metal frame-work.	
				<u>TOP CAP</u> See K1001/AI/5.2.	
				<u>DIMENSIONS</u> See drawing on page 4	

NOTES

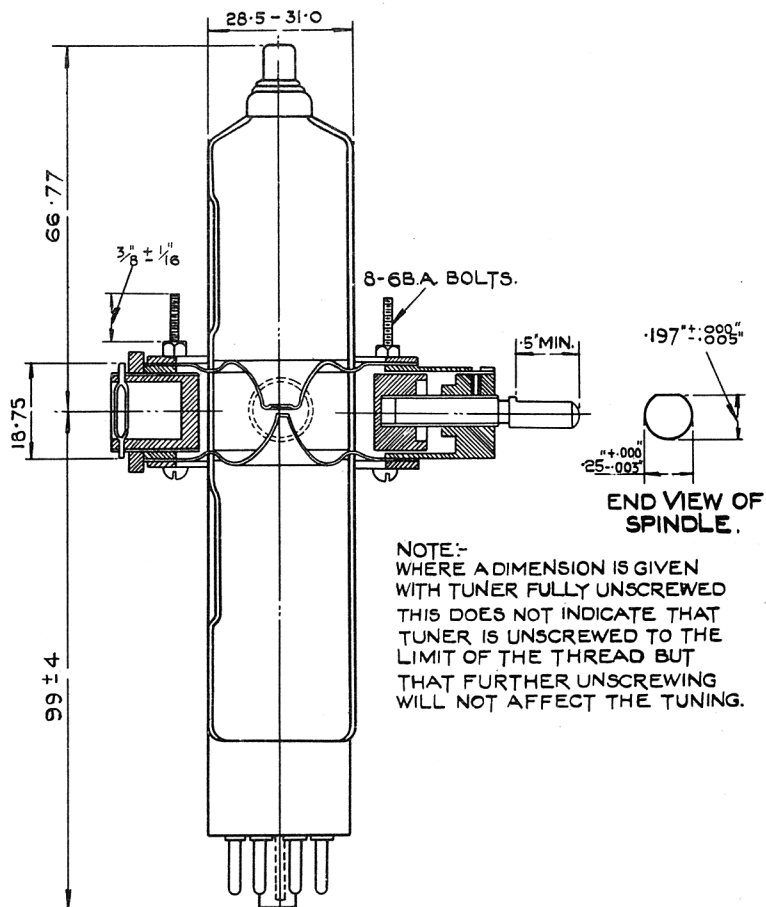
- A: All internal and external copper parts shall be carefully cleaned with acid. The resonator shall be plated first with copper and then with silver.
- B: The valve shall be processed to withstand a maximum anode voltage of not less than 3.0kV. positive with respect to grid and reflector strapped.
- C: The terms anode and resonator are synonymous.
- D: In operation the temperature of the resonator must not exceed 100°C., and if the mounting gives insufficient cooling by conduction then artificial cooling must be used.
- E: The valve has been designed to operate at zero grid voltage.
- F: Variation of resonator and reflector voltages to cover the ranges shown in test clause (c) should be provided in equipments.

To be performed in addition to those applicable in K1001

Test Conditions					Test	Limits		No. Tested	Notes
						Min.	Max.		
	Vh	Vg	Va	Vr					
a	See K1001/5.3				H-C Leakage Current (μ A)	-	50	100%	
b	4.0	0	0	0	Ih (A)	-	1.6	100%	
c	4.0	0	varied	varied	1. Range over which oscillations can be obtained (Mc/s)	3226 to 3370	100%		
	Max. power input 10W. Frequency of oscillation varied by means of preset and fine tuners.				2. Va over range (kV)	1.0	1.5	100%	
					3. Vr over range (V)	-300	-420	100%	
d	4.0	0	varied	varied	1. Power output at 3,300 Mc/s. (mW)	200	-	100%	2
	Pre-set tuners adjusted to give frequency of oscillation of 3,300 Mc/s when fine tuner is at the centre of its traverse.				2. Power output over full range of fine tuner, Va and Vr being left unchanged. (mW)	100	-	100%	
	Max. power input 10W. Va and Vr adjusted for max. output at 3,300Mc/s								
e	4.0	0	varied	varied	Fine tuner range (Mc/s)	46	-	1% (1)	2
	Frequency of oscillation varied by means of fine tuner only. Valve loaded resistively for max. output. Other test conditions as for test (d)								
f	3.8	0	varied	varied	Power output at 3,300 Mc/s. (mW)	100	-	100%	2
	Other test conditions as for test (d)								
g	4.0	0	varied	varied	Frequency drift to be measured from the time of application of electrode voltages to the cold tube to the time when a steady state has been reached.				2 and 3
	Other conditions as in test (d)				Positive drift (Mc/s)	-	0		
					Negative drift (Mc/s)	-	5.0		

TESTSNOTES

- 1: The symbol Vr is used to designate the reflector voltage. The symbol Va is used to designate the resonator voltage.
- 2: For test clauses (d), (e), (f) and (g), Va and Vr must be within the limits given in test clause (c2) and (c3).
- 3: Before bulk delivery commences, the results on 25 valves shall be submitted to M.O.S., R.D.C.8. If these are satisfactory, the manufacturer will not be required to carry out the test on further valves.



ALL DIMENSIONS IN
MILLIMETRES UNLESS
OTHERWISE STATED.

