

Specification MAP/CV158/Issue 3 Dated 31.12.48. To be read in conjunction with K1001 ignoring clauses:- 5.2.1.2., 5.8, 7.2.	<u>SECURITY</u>	
	<u>Specification</u> RESTRICTED	<u>Valve</u> UNCLASSIFIED

→ Indicates a change

<u>TYPE OF VALVE</u> - Velocity modulated oscillator <u>CATHODE</u> - Indirectly heated <u>ENVELOPE</u> - Glass - unmetallised			<u>MARKING</u> See K1001/4		
			<u>PACKING</u> See K1005		
<u>RATING</u>			<u>BASE</u> I.O.		
Heater Voltage	(V)	4.0	Note	Pin	Electrode
Heater Current	(A)	1.60		1	Grid
Min. Oscillation Frequency	(Mc/s)	3137		2	Heater
Max. Oscillation Frequency	(Mc/s)	3253		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)	-320	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 GAP</u> See K1001/AI/5.2	
				<u>DIMENSIONS</u> See drawing on page 3.	

NOTES

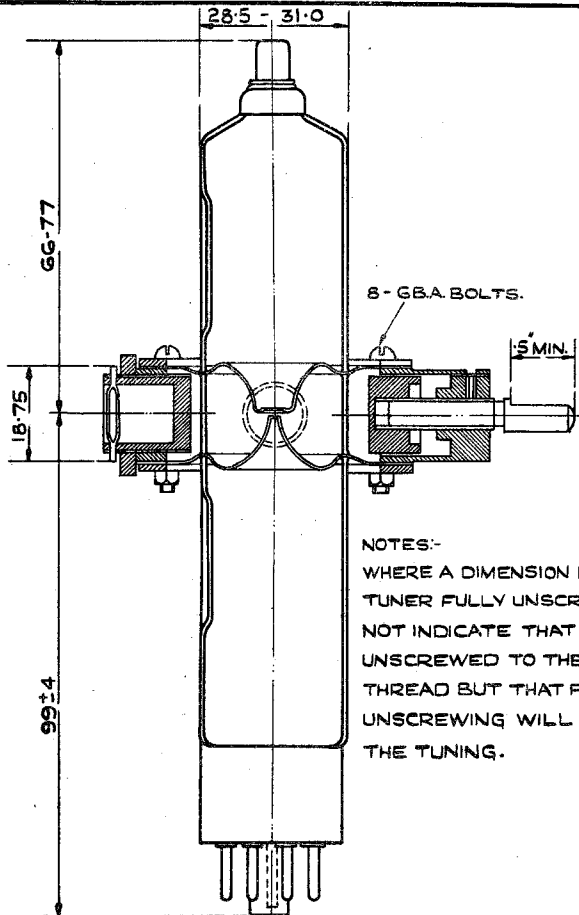
- A - All internal and external copper parts shall be carefully cleaned with acid. The resonator shall be plated first with copper then with silver.
- B - The valve shall be processed to withstand a maximum anode voltage of not less than 3.0kV. positive with respect to grid and reflector strapped.
- 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 - Variations 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.

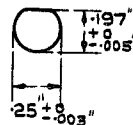
	Test Conditions				Test	Limits		No. Tested
	Vh	Vg	Va	Vr		Min.	Max.	
a	See K1001/5.3				H-C Leakage Current ( $\mu$ A)	-	50	100%
b	4.0	0	0	0	Ih (A)	-	1.6	100%
c	4.0	0	Varied	Varied	1. Range over which oscillations can be obtained. (Mc/s) 2. Va over range (kV) 3. Vr over range (V)	3137 to 3253	1.0 1.5	100% 100% 100%
d	4.0	0	Varied	Varied	1. Power output at 3195 Mc/s. (mW) 2. Power output over full range of fine tuner, Va and Vr being left unchanged. (mW)	140	-	100% 100%
e	4.0	0	Varied	Varied	Fine tuner range (Mc/s)	46	-	1%(1)
f	3.8	0	Varied	Varied	Power output at 3195 Mc/s. (mW)	100	-	100%
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 steady state has been reached. Positive drift (Mc/s) Negative drift (Mc/s)	-	0 5.0	See Note 3.

## NOTES

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

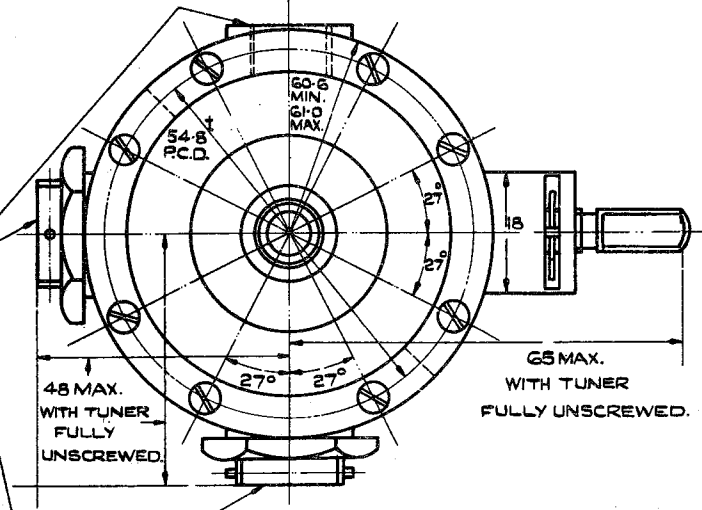


END VIEW OF SPINDLE.



NOTES:-  
 WHERE A DIMENSION IS GIVEN WITH TUNER FULLY UNSCREWED THIS DOES NOT INDICATE THAT TUNER IS UNSCREWED TO THE LIMIT OF THE THREAD BUT THAT FURTHER UNSCREWING WILL NOT AFFECT THE TUNING.

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.



THREE SOCKETS AND TWO TUNING PLUNGERS TO BE 5/8" DIA. 26 T.P.I. TO MEDIUM FIT TOLERANCES (TABLE 24A. BSS 84-1940) AFTER PLATING. LOCK NUTS 23-24 ACROSS FLATS.