

MINISTRY OF SUPPLY (S.R.D.E.)VALVE ELECTRONIC

Specification No. MOS/CV.485 Issue 1 Dated 1.1.57. To be read in conjunction with K1001 and BS 1409			<u>SECURITY</u> <u>Specification</u> Unclassified		<u>Valve</u> Unclassified	
TYPE OF VALVE: Velocity-modulated coaxial line oscillator ENVELOPE: Glass CATHODE: Indirectly Heated PROTOTYPE: CV.228 selected					<u>MARKING</u> See K1001/4	
<u>RATING</u>			Note	<u>BASE</u> B7G		
Heater voltage (V) 6.3 ± 5%				<u>CONNECTIONS</u>		
Nominal heater current (A) 0.3			A			
Grid voltage V _{g1} (V) -10V			B	Pin	Electrode	
Resonator voltage V _{Res} (V) 220 ± 5%				1	Grid	
Screen voltage V _{g2} (V) 0 to V _{Res}			C	2	Cathode	
Anode voltage V _a (V) (V _{Res} +10) to (V _{Res} +20)			D	3	Heater	
Power output (Min.) (W) 0.25			E	4	Heater	
Cathode current (max.) (mA) 40			F	5	Anode	
Tuning range (min.) (Mc/s) 4580 to 4860				6	Resonator (Note G)	
Magnetic field (min.) gauss 1100				7	Screen Grid	
				<u>DIMENSIONS</u> See attached drawing		
<u>NOTES</u>						
A. AC frequencies above 65 c/s must not be used.						
B. At f = 4650 Mc/s.						
C. Adjust to give specified cathode current. V _{g2} must not exceed V _{Res} .						
D. Operation with V _a = V _{Res} may result in increased noise output.						
E. Measured at 4650 Mc/s with coupling adjusted to optimum.						
F. Magnet Jessops Type Nos. 10512 or 9501.						
G. The copper disc to connect internally to pin 6.						

TESTS

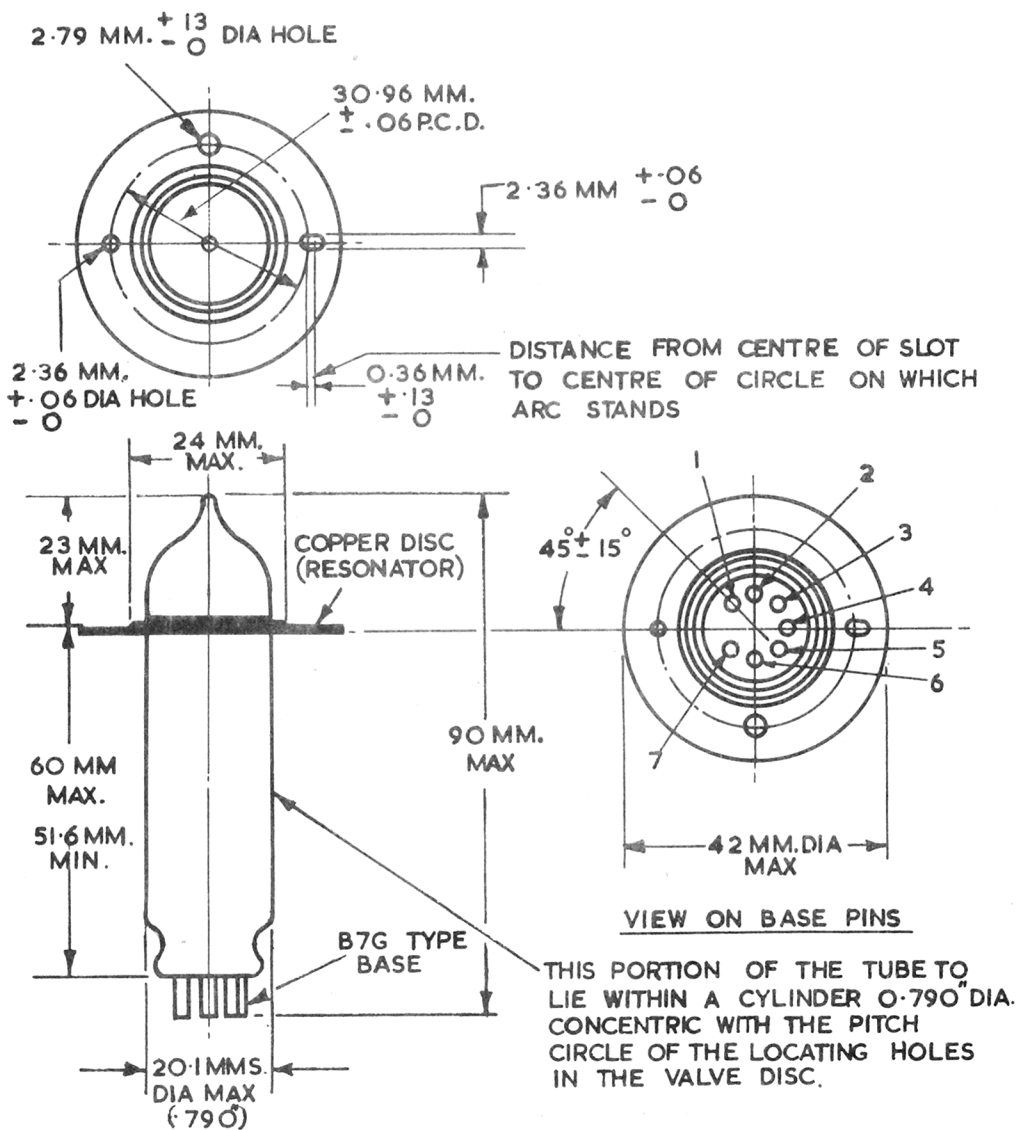
To be performed in addition to those applicable in K1001

Test Conditions							Test		Limits		No.
									Min.	Max.	Tested
	V _h (V)	V _{g1} (V)	V _a (V)	V _{Res} (V)	V _{g2} (V)	I _k (mA)					
a	6.3	-	-	-	-	-	Heater current	(A)	0.25	0.35	100%
b	6.3	-10	240	220	Adj.	40	Anode current	(mA)	17	-	100%
							Screen Voltage	(V)	-	160	
							Screen current	(mA)	-	3	
							Grid current	(μA)	-	30	
See Note 3											
Oscillations at 4,650 Mc/s											
c	6.3	-10	V _{Res} +20	Adj.	Adj.	40	Resonator Voltage	(V)	200	230	100%
							Power output	(mW)	250	-	
							Circuit length	(cms)	-	4.75 (1c2)	
See Notes 1 to 4											
Oscillations at 4,860 Mc/s											
d	6.3	-10	V _{Res} +20	Adj.	Adj.	40	Circuit length	(cms)	6.05 (1c1)	-	100%
See Notes 1 to 4											
e							1c1-1c2	(cms)	1.45	1.80	100%

NOTES

1. The valve to be operated in an approved circuit constructed from 2" x 1" internal, waveguide, with an output probe situated in the centre of the end face of the cavity adjacent to the valve. The coupling to be adjusted for maximum output power.
2. V_{Res} to be adjusted for maximum output power.
3. The magnet must be adjusted to give maximum anode current. If the magnet is finally fixed in relation to pins engaging the location holes in the tube disc, tubes may be changed without further adjustment. The magnet should have a field strength of between 1100 and 1150 gauss.
4. Circuit length l_c is measured between the longitudinal axis through the valve and the shorting face of the piston.

ALL DIMENSIONS ARE IN MILLIMETRES



SCALE:- 1:1 3⁺