VALVE ELECTRONIC

ADMIRALTY SIGNAL AND RADAR ESTABLISHMENT

C.V.2343.

Specification AD/CV2343 Issue No. 2 dated 13th July 1956 To be read in conjunction with K1001 (ignoring clause 5.3), B.S.448 and B.S. 1409	SECURITY Specification: Unclassified Valve: Unclassified

→ Indicates a change.

TYPE OF VALVE:- Velocity Modulator Oscillator with Waveguide Output.

CATHODE:- Indirectly heated.

PROTOTYPE:- K302, VX2505

MARKING
See K1001/4

BASE
B.S. 448/B8-0

RATINGS			Note
Heater Voltage	(V)	6.3	
Heater Current	(A)	0.56	
Max. Resonator Voltage	(V)	400	A
Max. Resonator Dissipation	(W)	20	A
Reflector Voltage Range	(V)	-110 to -180	B
Min. RF Power Output	(mW)	15	
Mechanical Tuning Range	(Mc/s)	9555 to 9685	
Min. Electronic Tuning Range	(Mc/s)	20	
Nominal Reflector Voltage change to give 20 Mc/s electronic tuning.	(V)	15	
Max. total impedance in reflector to cathode circuit	(MΩ)	0.25	A

CONNECTIONS

Pin	Electrode
1	NC
2	h
3	NP
4	NP
5	Res.
6	NP
7	h-k
8	NC
T.C.	Ref.

TOP CAP
B.S. 448/CT1

DIMENSIONS
See drawing on Page 5.

MOUNTING POSITION
Any

NOTES

A. Absolute Maximum Value.

B. Each valve is marked with the reflector voltage and micrometer setting at which the valve will give maximum power output at 9620 ± 10 Mc/s.

C. The reflector voltage must always remain negative with respect to the cathode. If under A.F.C. working there is a chance of the reflector voltage becoming equal to, or positive with respect to the cathode, a protective diode must be used.

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TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions				Test	Limits		No. Tested	Note
	Vh (V)	V Res. (V)	V Ref. (V)	Freq. (Mc/s)		Min.	Max.		
a	6.3	0	0	-	Ih (A)	0.52	0.61	100%	
b	6.3	350	Adjust	9620 ± 20	RF Power Output (mW) Measured within three minutes of switching on all supplies	12	-	10% (5)	
					Reflector Voltage (V)	-110	-180	10% (5)	1
c	6.3	350	Adjust	9620 ± 20	Frequency Drift (Mc/s) Measured as the frequency change between 4 minutes and 10 minutes after switching on all supplies.	0	5	100%	
					Reflector Voltage (V)	-110	-180	10% (5)	1
					Beam Current (mA)	-	44	10% (5)	
d	6.3	350	Adjust	9555	RF Power Output (mW)	15	-	100%	
					Reflector Voltage (V)	-110	-180	100%	1
e	6.3	350	Ajust	9555	Electronic Tuning (Mc/s) Measured at 3 dB points.	20	70	100%	
f	6.3	350	Adjust	9685	RF Power Output (mW)	15	-	100%	
					Reflector Voltage (V)	-110	-180	100%	1
g	6.3	350	Adjust	9685	Electronic Tuning (Mc/s) Measured at 3 dB points.	20	70	100%	
h	6.3	350	Adjust	9555	Hysteresis There shall be no discontinuous change in output within ± 10 Mc/s of mode centre.	-	-	100%	2
j	6.3	350	Adjust	9685	Hysteresis There shall be no discontinuous change in output within ± 10 Mc/s of mode centre.	-	-	100%	2

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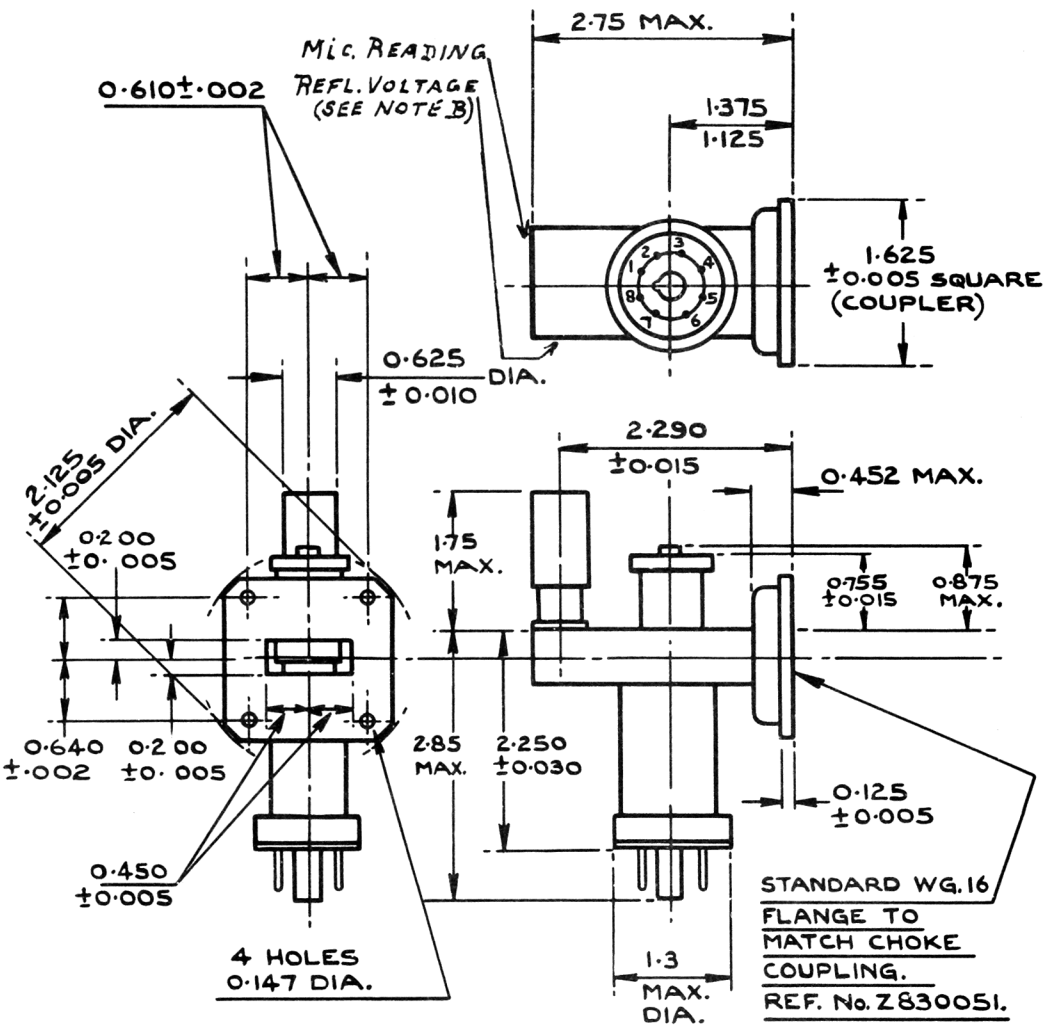
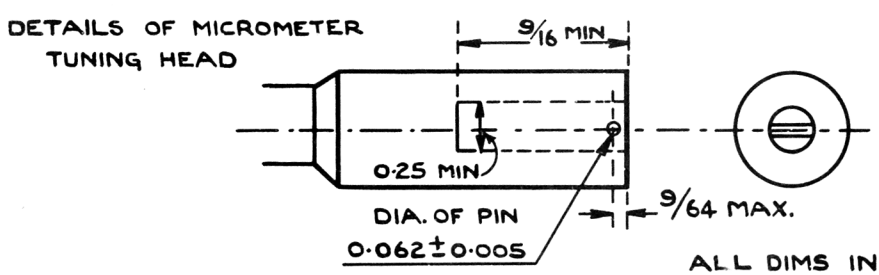
	Test Conditions				Test	Limits		No. Tested	Note
	Vh (V)	V Res. (V)	V Ref. (V)	Freq. (Mc/s)		Min.	Max.		
k	6.3	350	Adjust	9620 ± 20	Frequency Variation (Mc/s) When 1 Megohm resistor is inserted in series with reflector lead.	-	4	10% (5)	1
l	6.3	350	Adjust	9620 ± 10	Reflector Voltage and Micrometer Reading To give maximum power at this frequency, values to be marked on valves.			100%	
m	5.7	350	Adjust	9620 ± 20	RF Power Output (mW)	10	-	10% (5)	
n	5.7	350	Adjust	9620 ± 20	Decrease in Beam Current from value in test (C)	-	20%	10% (5)	
					Reflector Voltage (V)	-110	-180	10% (5)	1
o	6.3	350	Adjust	9555	Mechanical Tuning Rate Mc/s per thousandth of an inch.	-	5	100%	1
p	0	0	-	-	Tuning Shaft Torque (inch/oz)	0	4	100%	3

NOTES

1. Reflector voltages given correspond to the maximum power point of the reflector mode.
2. Reflector voltage to be varied 30 volts peak to peak at a frequency greater than 40 c/s and the d.c. value of the reflector voltage adjusted so as to display whole mode.
3. This test to be carried out when the valve is cold, also at operating temperature.

OUTLINE OF VALVE CV2343





ALL DIMS IN INCHES