

SPECIFICATION MOS/CV 2273/ISSUE 2.

AMENDMENT No. 1.

Page 2.

Test clause (e). Electronic Tuning (Mc/s) Max. Limit:-

Amend 40 to read 70.

Test clause (g). Electronic Tuning (Mc/s) Max. Limit:-

Amend 40 to read 70.

August 1953.

T.V.C. Office.
(for RRDE)

Z.4919.R.

SPECIFICATION CV.2273

AMENDMENT No. 1.

Page 1. Amend " No. of Pages" to read 5.

Page 4. Mark this page - "Superseded by page 5".

Insert the attached Page 5.

E.C. De Val.

October 1955.

T.V.C. Office for R.R.E.

Z.10250.R.

SPECIFICATION CV.2273 (Issue 2)

Amendment 3

PROTOTYPE

DELETE K302 and enter VX9090

T.V.C. Office

December 1956

for R.R.E.

N.50689R

Specification MOS/CV2273 Issue 2, Dated 4.3.53 To be read in conjunction with K1001 ignoring clause 5.3	<u>SECURITY</u>	
	<u>Specification</u> Unclassified	<u>Valve</u> Unclassified

<u>TYPE OF VALVE:-</u> Velocity modulated oscillator with waveguide output <u>CATHODE:-</u> Indirectly-heated <u>PROTOTYPE:-</u> K302			<u>MARKING</u> See K1001/4
			<u>BASE</u> I.O.
<u>RATING</u>		Note	<u>CONNECTIONS</u>
Heater voltage (V)	6.3		<u>Pin</u> <u>Electrode</u>
Heater current (A)	0.56		1 No connection
Max. resonator voltage (V)	400		2 Heater
Max. resonator dissipation (W)	20		3 Blank
Reflector voltage range (V)	-110	A	4 Blank
	-180	A	5 Resonator
Min. R.F. power output (mW)	15		6 Blank
Mechanical tuning range (Mc/s)	9430		7 Heater-Cathode
	-9650		8 No connection
Min. electronic tuning range (Mc/s)	20		T.C. Reflector
Nominal reflector voltage change to give 20 Mc/s electronic tuning (V)	15		<u>TOP CAP</u>
Max. total impedance in reflector to cathode circuit (Megohm)	0.25		See K1001/A1/D5.2
			<u>DIMENSIONS</u>
			See drawing page 4
			<u>MOUNTING POSITION</u>
			Any

NOTES

- A. Each valve is marked with the reflector voltage at which the valve will oscillate and give a power output of at least 5 mW over the whole band. It is also marked with the micrometer reading which gives 9540 Mc/s.
- B. 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.

To be performed in addition to those applicable in K1001

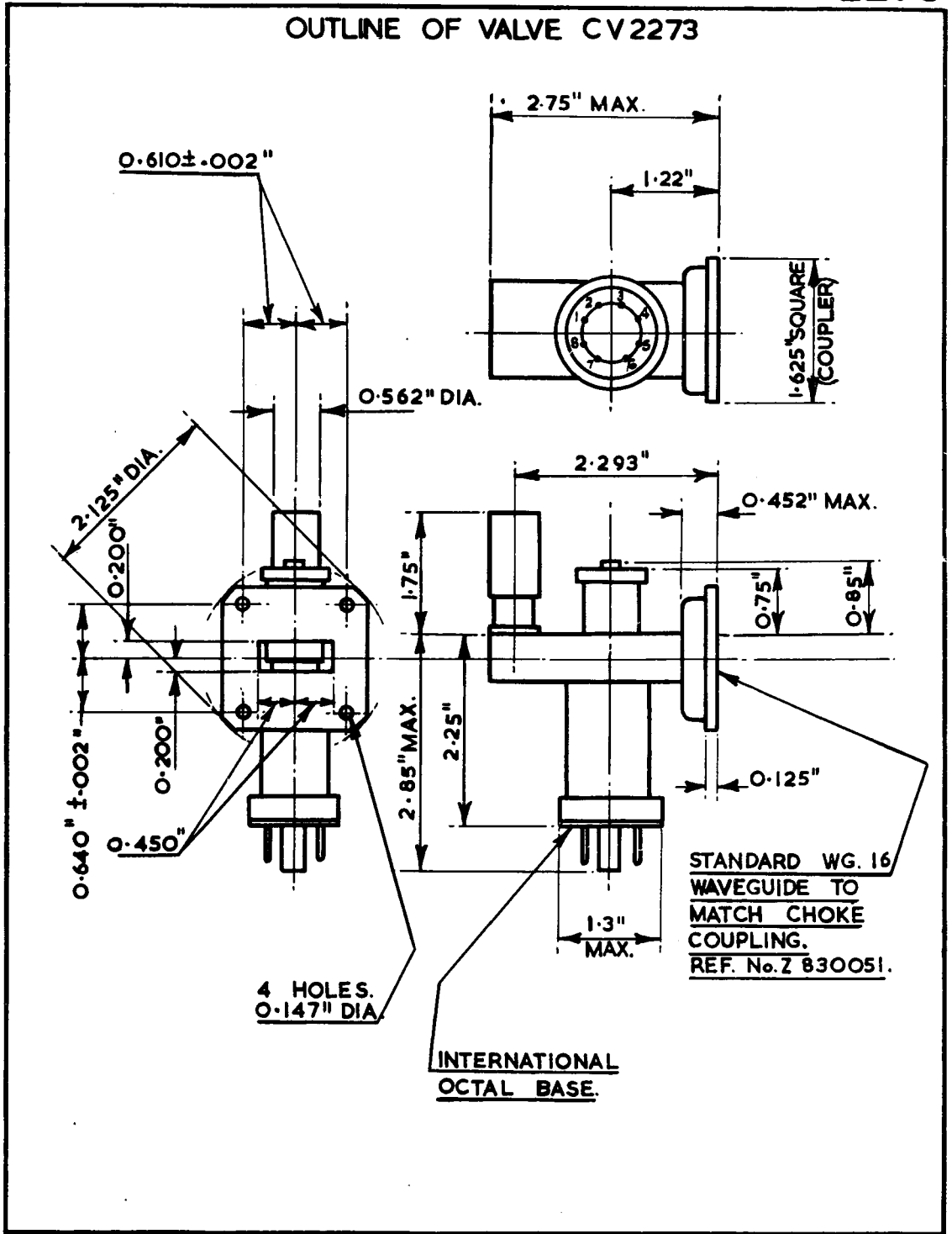
	Test Conditions				Test	Limits		No. Tested	Note
	Vh (V)	Vres. (V)	Vref. (V)	Freq. (Mc/s)		Min.	Max.		
a	6.3	0	0	-	Heater Current (A)	0.52	0.61	100%	
b	6.3	350	Adjust	9540 +20	R.F. Power Output (mW) Measured within three minutes of switching on all supplies.	12	-	10% (5)	
					Reflector Voltage (V)	-110	-180	10% (5)	1
c	6.3	350	Adjust	9540 ± 20	Frequency Drift (Mc/s) Measured as the fre- quency 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	9430	R.F. Power Output (mW)	15	-	100%	
					Reflector Voltage (V)	-110	-180	100%	1
e	6.3	350	Adjust	9430	Electronic Tuning (Mc/s) Measured at 3 db points.	20	40	100%	
f	6.3	350	Adjust	9650	R.F. Power Output (mW)	15	-	100%	
					Reflector Voltage (V)	-110	-180	100%	1
g	6.3	350	Adjust	9650	Electronic Tuning (Mc/s)	20	40	100%	
					Measured at 3 db points.				
h	6.3	350	Adjust (Note 2)	9430	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)	Vres (V)	Vref (V)	Freq. (Mc/s)		Min.	Max.		
j	6.3	350	Adjust (Note 2)	9650	<u>Hysteresis</u> There shall be no discontinuous change in output within ± 10 Mc/s. of mode centre.	-	-	100%	2
k	6.3	350	Adjust	9540 ± 20	<u>Frequency Variation</u> (Mc/s) When Megohm resistor is inserted in series with reflector lead	-	4	10% (5)	1
m	6.3	350	Adjust Value to -9650 be marked on valve	9430	<u>Reflector Voltage(V)</u> To give at least 5 mW power output over full frequency range.	-110	-180	100%	
n	5.7	350	Adjust	9540 ± 20	<u>R.F. Power Output</u> (mW)	10	-	10% (5)	
o	5.7	350	As for test(n)	As for Test(n)	<u>Decrease in Beam Current</u> from value in test (o) <u>Reflector Voltage</u>	-	20%	10% (5)	1
p	6.3	350	Adjust		<u>Micrometer Reading</u> Set micrometer to reading marked on valve. Measure frequency (Mc/s)	9530	9550	100%	

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 D.C. adjusted so as to display whole mode.



OUTLINE OF VALVE CV 2273

