

MINISTRY OF SUPPLY D. L. R. D. / R. A. E.

Specification M.O.S./CV.354 Issue 5 Dated 20.1.58 To be read in conjunction with K.1001,(excluding clause: 5.3), BS.1409	<u>SECURITY</u>	
	<u>Specification</u> UNCLASSIFIED	<u>Valve</u> UNCLASSIFIED



Indicates a change

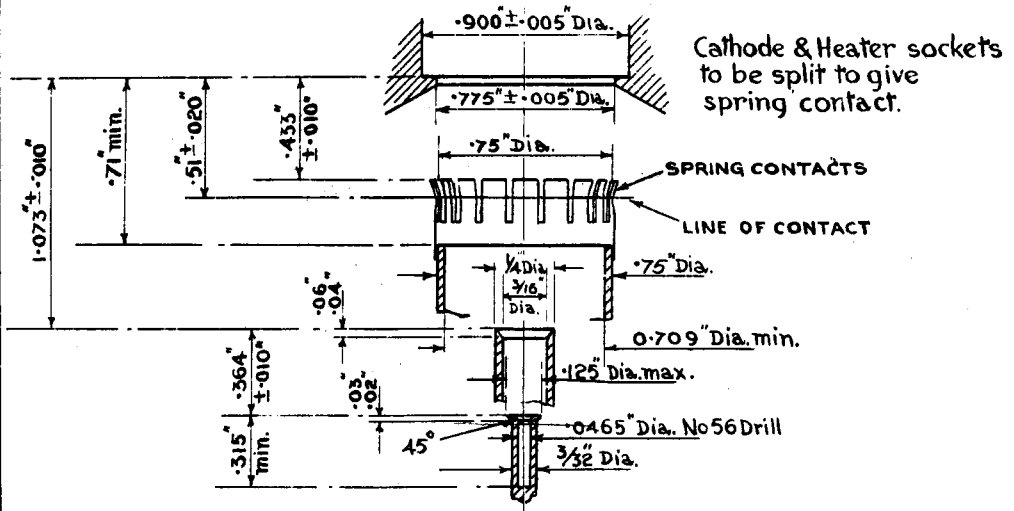
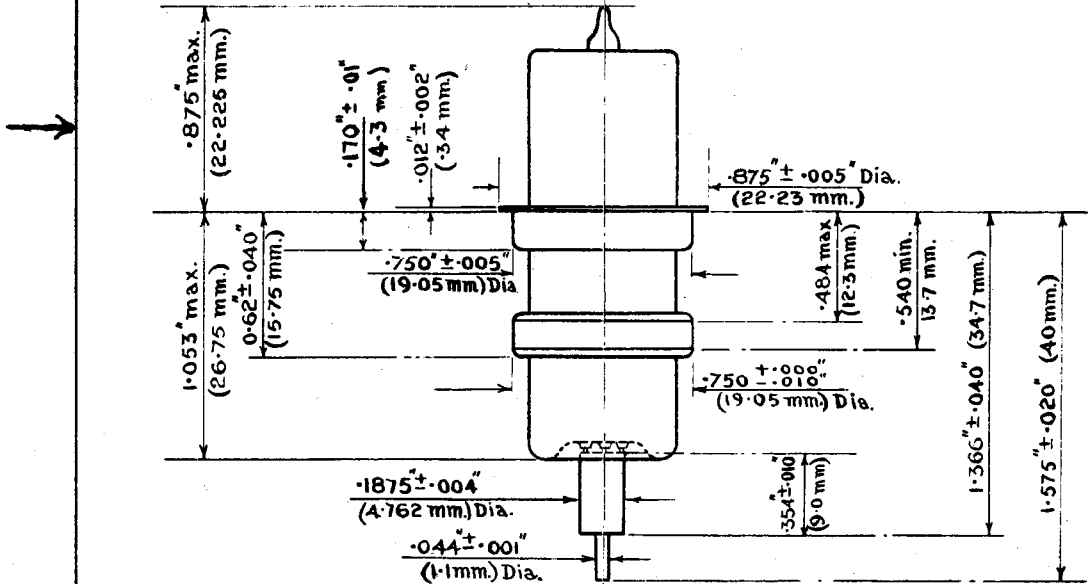
TYPE OF VALVE - Disc Seal Triode CATHODE - Indirectly Heated ENVELOPE - Glass PROTOTYPE - VX.3019	<u>MARKING</u> See K.1001/4																																								
<p style="text-align: center;"><u>RATINGS</u> (All limiting values are absolute)</p> <table border="1"> <thead> <tr> <th></th> <th></th> <th>Note</th> </tr> </thead> <tbody> <tr> <td>Heater Voltage</td> <td>(V) 6.3</td> <td></td> </tr> <tr> <td>Heater Current</td> <td>(A) 0.4</td> <td></td> </tr> <tr> <td>Max. Anode Voltage</td> <td>(V) 350</td> <td></td> </tr> <tr> <td>Max. Anode Dissipation</td> <td>(W) 10</td> <td>A</td> </tr> <tr> <td>Max. Anode Current</td> <td>(mA) 50</td> <td></td> </tr> <tr> <td>Max. Peak Anode Current</td> <td>(mA) 150</td> <td></td> </tr> <tr> <td>Amplification Factor</td> <td>70</td> <td>B</td> </tr> <tr> <td>Mutual Conductance</td> <td>(mA/V) 6.5</td> <td>B</td> </tr> <tr> <td><u>Noise Factor (dB)</u></td> <td></td> <td>C</td> </tr> <tr> <td>(1) at 1000 Mc/s with 15 dB power gain</td> <td>9.5</td> <td></td> </tr> <tr> <td>(2) at 1500 Mc/s with 13.5 dB power gain</td> <td>12.0</td> <td></td> </tr> <tr> <td>(3) at 2000 Mc/s with 11.5 dB power gain</td> <td>14.5</td> <td></td> </tr> </tbody> </table>			Note	Heater Voltage	(V) 6.3		Heater Current	(A) 0.4		Max. Anode Voltage	(V) 350		Max. Anode Dissipation	(W) 10	A	Max. Anode Current	(mA) 50		Max. Peak Anode Current	(mA) 150		Amplification Factor	70	B	Mutual Conductance	(mA/V) 6.5	B	<u>Noise Factor (dB)</u>		C	(1) at 1000 Mc/s with 15 dB power gain	9.5		(2) at 1500 Mc/s with 13.5 dB power gain	12.0		(3) at 2000 Mc/s with 11.5 dB power gain	14.5		<p style="text-align: center;"><u>DIMENSIONS AND CONNECTIONS</u> See Drawings on Pages 3 and 4.</p>	
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<u>NOTES</u>																																									
A. The anode seal temperature must not exceed 140°C. In order to achieve this, and also to limit the rate of change of anode seal temperature, it is necessary that the mass of metal in close thermal contact with the anode disc shall not be less than 2 oz. (approx. 60 grams) of brass or its equivalent.																																									
B. With V <sub>a</sub> = 250 V., I <sub>a</sub> = 10 mA.																																									
C. Noise factor figures refer to the use of the valve as a small signal amplifier preceding a crystal mixer of noise factor = 11 dB.																																									

To be performed in addition to those applicable in K.1001

	Test Conditions				Test	Limits		No. Tested	Note
						Min.	Max.		
a	Measurements shall be made at a frequency of 1.0 Mc/s, using a jig which shall conform to R.A.E. Drawing No. W.T.40482 or any other approved method.				Capacitances (pF) Cag Cin Cout	0.7 1.45 -	1.2 2.5 .018	6 per week. T.A.	
b	Vh	Va	Vg	Ia(mA)	Ih (A)	0.37	0.43	100%	
	6.3	0	0	0					
c	6.3	350	Adjust	15	Reverse Ig (μA)	-	1.0	100%	1
d	6.3	350	Adjust	2	Reverse Ig (μA)	-	1.0	100%	
e	6.3	250	Adjust	10	Vg (V)	-0.8	-3.4	100%	
f	6.3	250	As in test(e) peak grid swing ± 0.5 V max.	-	gm (mA/V)	4.5	-	100%	
g	6.3	250	Adjust	1	Vg (V)	-	-7.5	100%	

NOTES

1. Valve must be run for one minute before reading is taken.



RECOMMENDED CIRCUIT DIMENSIONS

