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

VALVE ELECTRONIC **C.V.397**

SPECIFICATION MOS/CV.397 Issue 5 Dated 1.7.59 To be read in conjunction with K.1001.	SECURITY SPECIFICATION: Unclassified VALVE: Unclassified

→ Indicates a change

TYPE OF VALVE - Disc Seal Triode

CATHODE - Indirectly heated

ENVELOPE - Glass

PROTOTYPE - VX.3058

MARKING

See K.1001/4

BASE

None

RATING

			NOTES
Heater Voltage	(V)	6.3	
Heater Current	(A)	1.0	
Max. Anode Voltage	(V)	400	
Max. Anode Dissipation	(W)	20	A
Max. Mean Anode Current	(mA)	120	B
Amplification Factor		28	C
Mutual Conductance	(mA/V)	12	C

DIMENSIONS AND CONNECTIONS

See page 3 and 4.

CAPACITANCES (pF)

Cag (nom.)	2.3
Cac (nom.)	.05
Cgc (nom.)	5

NOTES

A. In order 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 should not be less than 4 ounces.

B. Under C.W. conditions.

C. Measured at Va = 400, Ia = 50 mA.

Z.19326.

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

TEST CONDITIONS: Unless otherwise stated.

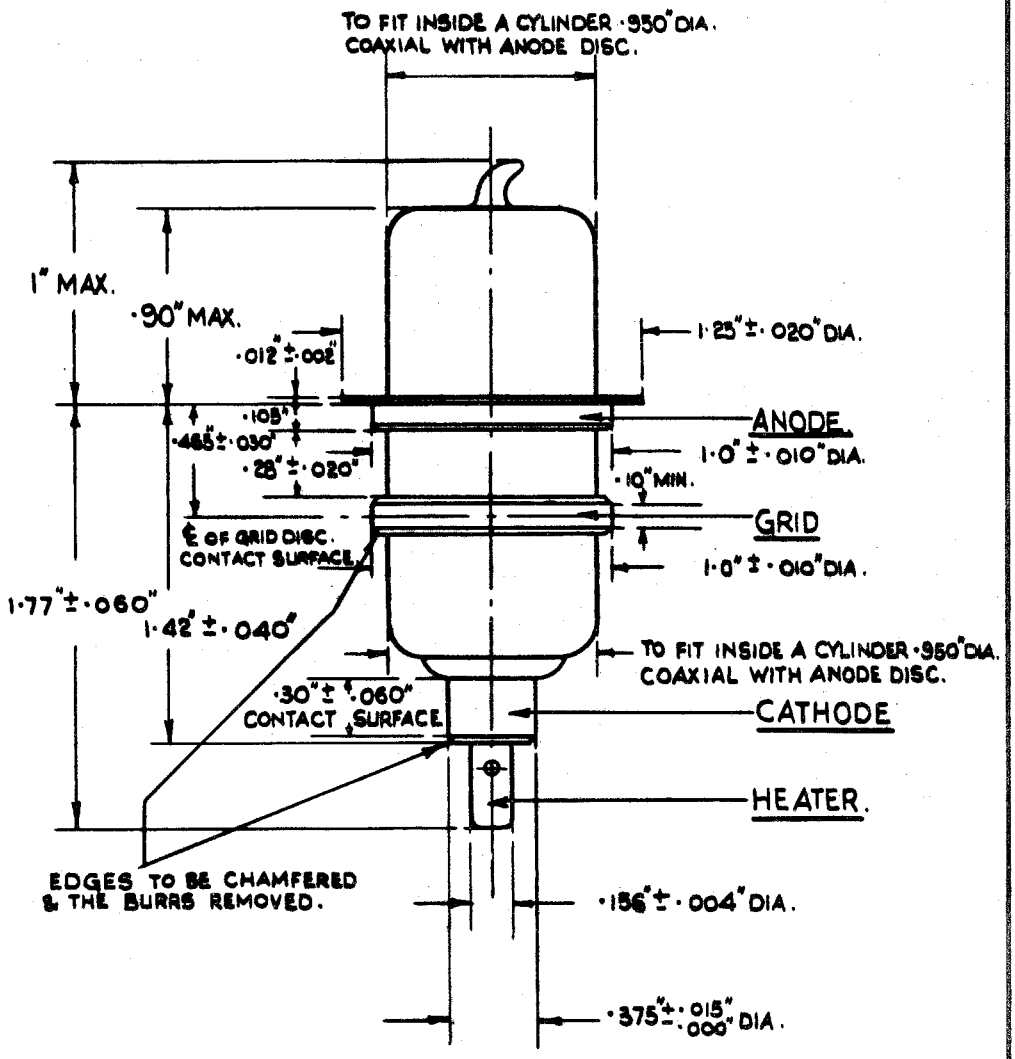
Vh (V)	Va (V)
6.3	400

Tests	Test Conditions	Insp. Level	AQL %	Symbol	LIMITS Min.	LIMITS Max.	Units
GROUP A							
Reverse Grid Current (1)	Adjust Vg for Ia = 50mA Note 1.	100%	-	-Ig1	-	5.0	μA
Reverse Grid Current (2)	Adjust Vg for Ia = 2mA	100%	-	-Ig1	-	5.0	μA
Negative Grid Volts (1)	Adjust Vg for Ia = 50mA	100%	-	-Vg	6.0	15.0	V
Mutual Conductance	Adjust Vg for Ia = 50mA Peak grid swing = ± 0.5V max.	100%	-	gm	8.0	-	mA/V
Negative Grid Volts (2)	Adjust Vg for Ia = 2mA	100%	-	-Vg	-	27	V
Peak Emission	Anode and grid strapped. Peak applied voltage = 200V. Tp = 200μ sec. Pulse shape sinusoidal. p.r.f. = 50 c/s.	100%	-	Ik(peak)	4.0	-	A
GROUP B							
Heater Current		II	1.5	Ih	0.95	1.1	A
C.W. Power Output	Va = 300V. Ia = 100mA max. Ig = 40mA max. f = 470Mc/s. min. Note 2.	II	2.5	Pout	10	-	W ←
GROUP C							
Capacitance	To be measured in an approved jig on an R.F. bridge at a frequency of 1Mc/s. Note 3.	IC	6.5	Cag Cac Cgc	1.9 - 3.0	2.7 0.075 6.0	pF pF pF

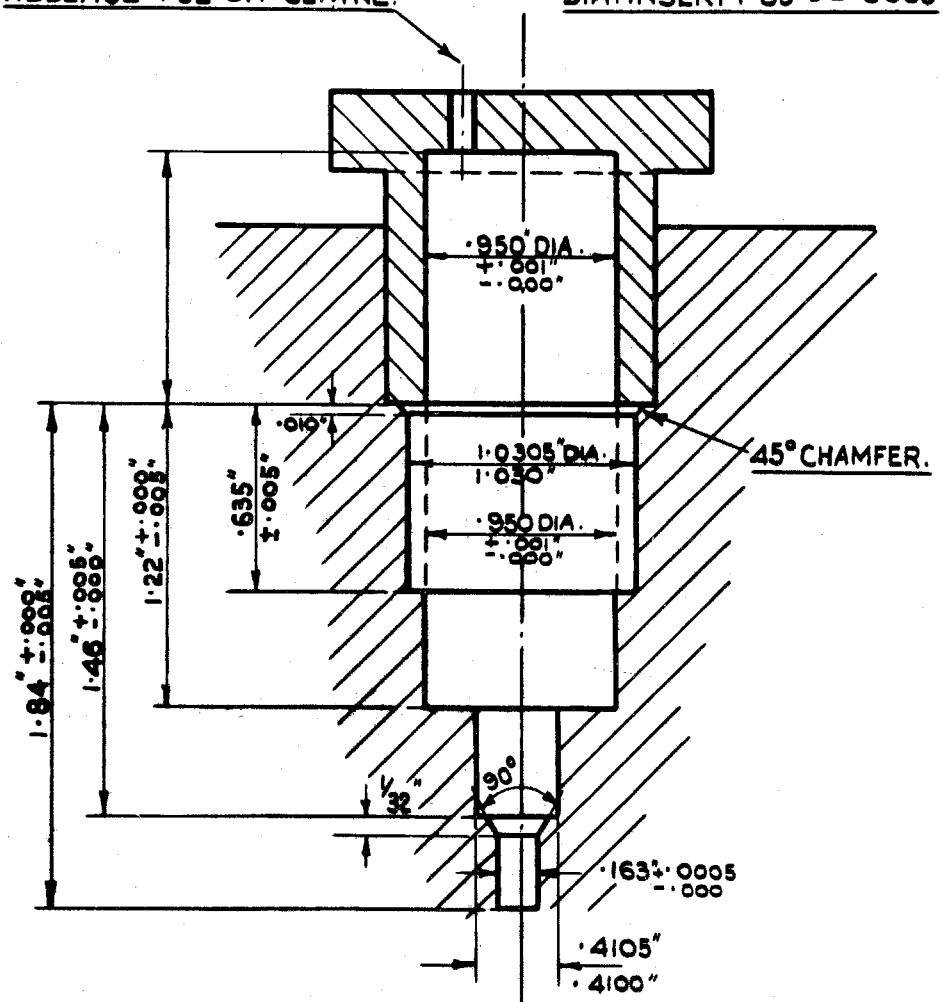
NOTES

1. The valve should be operated under the test conditions for two minutes before the readings are taken.
2. To be measured in an approved circuit.
3. R.A.E. Drawing Number WT.41544 shows a suitable jig for measuring capacitances.

CV397


TO FIT INSIDE A CYLINDER ·950" DIA. COAXIAL WITH ANODE DISC.
1" MAX.
·90" MAX.
·012" ± ·002"
·105"
·485" ± ·030"
·28" ± ·020"
1·25" ± ·020" DIA.
ANODE
1·0" ± ·010" DIA.
·10" MIN.
GRID
1·0" ± ·010" DIA.
℄ OF GRID DISC. CONTACT SURFACE.
1·77" ± ·060"
1·42" ± ·040"
TO FIT INSIDE A CYLINDER ·950" DIA. COAXIAL WITH ANODE DISC.
·30" ± ·060" CONTACT SURFACE
CATHODE
HEATER.
EDGES TO BE CHAMFERED & THE BURRS REMOVED.
·156" ± ·004" DIA.
·375" +·015" −·000" DIA.

CV.397



SECTION ON ℄ OF GAUGE

C.V.397 CONCENTRICITY GAUGE.

ALL DIMENSIONS IN INCHES.

CV397/5/4