MINISTRY OF SUPPLY - DLRD/RRE

VALVE ELECTRONIC **CV2396**

Specification MOS/CV2396 Issue 1 Dated 26 Nov 1956 To be read in conjunction with K1006	SECURITY Specification: UNCLASSIFIED Valve: UNCLASSIFIED

TYPE OF VALVE - T.R. Switch, Separate cavity

PROTOTYPE - VX9175

Nearest Equivalent American Specification - MIL-E-1/21

MARKING

See K1001/4

RATING			Note
Operating Frequency	(Mc/s)	950	
Max Ignitor Voltage	(V)	-1000	
Min Ignitor Voltage	(V)	-800	
Max Ignitor Current	(uA)	200	

Dimensions & Connections

See drawing on page 3

MOUNTING POSITION

Any

NOTES

This valve is a near-equivalent of the 1B23

Z.13328.R.

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Ratings:	Iz	Open Circuit Ignitor Voltage Vdc
Absolute Maximum:	uAdc 200	-1000
Minimum:	—	- 800
* Dimensions:	Per Outline	

Pack in sealed moisture resistant bag or approved equivalent. If opaque bag is used, the tube type number shall be stamped thereon.

Ref. K1006	Test	Conditions		Min.	Max.
3.1.	Type Approval :	Required for K Marking			
4.9.18.1.8. F-6a(3h)	Carton Drop:	(d) Package Group 1; Carton Size F			
4.9.19.1	* Vibration :	G=10;F=50;t=60; Note 1			
4.9.8 F-5h	Salt Spray :	Omit			
4.9.6 F-5g	* Glass Strain :				
4.18.1	Ignitor Firing Time :	Ebb = - 800 Vdc; R=3.25 megohms	t	—	5.0 sec
4.18.2	Ignitor Voltage Drop :	Iz = 100 uAdc	Ez	300	425 Vdc
4.18.3	* Ignitor Oscillation. :	Note 2	Iz	—	70 uAdc
	Low Power Tests				
4.18.7	Tuning :	Note 1	F	949	951 Mc
4.18.4.3	Insertion Loss :	Note 3; F = 950 Mc	Li	—	1.6 db
4.18.5.1	Ignitor Interaction :	Iz = 100 uA dc	ALi	—	0.2 db
	High Lower Tests				
4.18.9	Leakage Power	Po = 10kW ± 5%; tp = 1.0 ± 10% US : prr = 500 ± 10% F = 600 ± 5 Mc/s; Note 4	P	—	5 watts peak
4.18.15	* Recovery Time	Po = 10kW ± 5% tp = 1.0 ± 10% US prr = 500 ± 10%; F = 600 ± 5 Mc/s; Note 5			

Ref. K1006	Test	Conditions		Min.	Max.
4.11 F-4	Life Test	Group C; Iz = 200uAdc; Note 6	t	500	— hr.
4.11.4 F-4b	Life Test End Point :	Ignitor Interaction Water Vapor Content	ALi P02/Pol	— —	0.2 db 0.8

Note 1 : This measurement shall be made with the tube mounted in test cavity per drawing 162-JAN or approved equivalent.

Note 2 : No tube shall require more than the stated maximum ignitor current to prevent relaxation oscillations when tested in the standard circuit.

Note 3 : This measurement shall be made in test cavity per drawing 162-JAN or approved equivalent. With the cavity calibrator in position the cavity shall be tuned to resonance and the relative transmitted power level noted. With the tube inserted, the cavity shall then be tuned to resonance and the transmitted power noted. The db loss in transmitted power due to the insertion of the tube shall not be more than the specified amount.

Note 4: The valve shall be mounted in an approved cavity. The leakage power shall be measured by means of a thermistor, the thermistor load being matched to within 0.5 db SWR to 50 ohms at the transmitter frequency.

Note 5: Using the conditions specified in Note 4, a signal generator pulse on the same frequency shall be injected after the transmitter pulse. The time delay at which the signal generator pulse reaches a level 6 db below its maximum value shall not exceed 8 microseconds after the leading edge of the transmitter pulse.

Note 6: The specified life is based on ignitor life only. This will be reduced if the tube is operated under full rated rf conditions.

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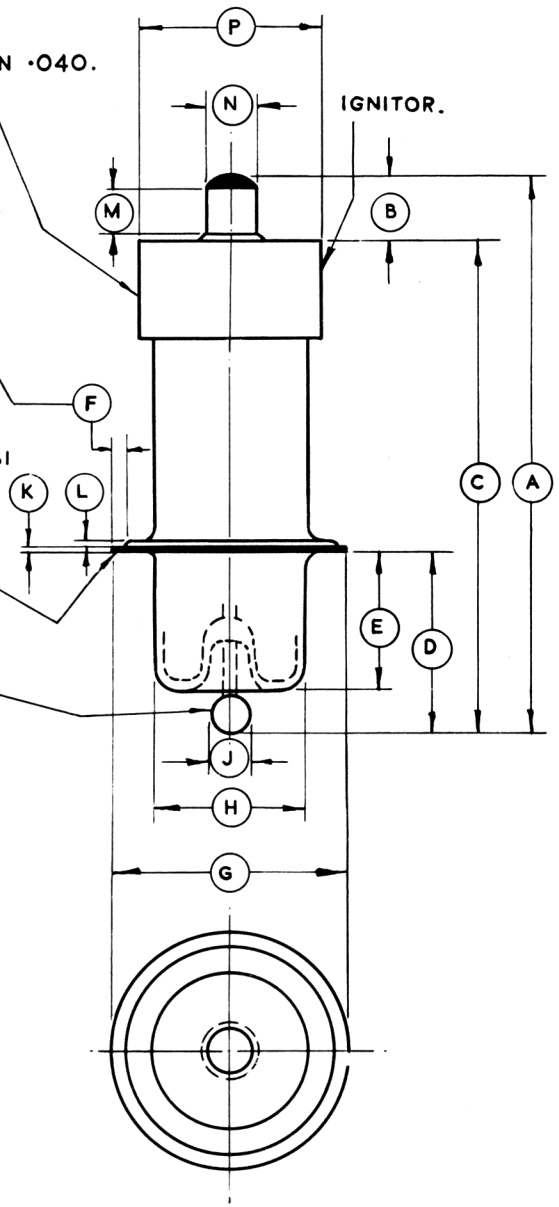
NOTE 2.
THE BASE SHALL BE CONCENTRIC WITH THE DISC. ELECTRODE WITHIN .040.

NOTE. 4.
CONTACT PORTION OF DISC MEASURED RADIALLY WHICH MUST BE FREE FROM SPLITS OR TEARS, MUST BE SMOOTH AND MUST BE PERCEPTABLY FLAT.

** NOTE. 3.
CONTACT DISC EXTERNAL SURFACES AND H-F ELECTRODE SHALL BE GOLD PLATED MIN 10 MSI OR SILVER PLATED 15 MSI ON EXTERNAL SURFACES (EDGES OF DISC NEED BE PLATED.)

NOTE. 1.
THE H-F ELECTRODE SHALL BE CONCENTRIC WITH THE DISC ELECTRODE WITHIN .018.



REF	DIMENSIONS
A	** $2\frac{51}{64} \pm \frac{3}{16}$
B	** $\frac{5}{16}$
C	$2\frac{31}{64} \pm \frac{3}{16}$
D	$\frac{15}{16} \pm \frac{1}{32}$
E	$\frac{23}{32} + \frac{1}{16}$
F	$\frac{3}{64}$ MIN.
G	* $1\frac{1}{8} \pm \frac{1}{64}$ DIA.
H	* $\frac{3}{4} \pm \frac{1}{16}$
J	* .187 ± .002
K	* * .008
L	* * $\frac{1}{32}$
M	* .220 MIN.
N	* .250 ± .004
P	* * .930 MAX. .896 MIN.

SPECIFICATION SHEET

GAS SWITCHING TUBE, TR, SEPARATE CAVITY TYPE.