

ADMIRALTY SIGNAL AND RADAR ESTABLISHMENT

TYPE OF VALVE:- Thyatron: Inert gas CATHODE:- Coated: Indirectly-heated. ENVELOPE:- Glass PROTOTYPE:- 3D22A			MARKING K1001/4 Additional Marking 3D22A	
RATINGS			BASE B.S.448/B7D	
CONNECTIONS			CONNECTIONS	
Pin			Electrode	
1			h	
2			g2	
3			k	
4			g1	
5			g2	
6			a	
7			h	
DIMENSIONS			DIMENSIONS	
See drawing on Page 2			See drawing on Page 2	

NOTE

A. All limiting values are absolute.

INDIVIDUAL MILITARY SPECIFICATION SHEET

ELECTRON TUBE, THYRATRON

JAN-3D22A

This specification sheet forms a part of the latest issue of Military Specification MIL-E-1.

<u>Ratings:</u>	Ef	epx	epy	eg2	egl	ik	Ik	igl	Igl
<u>Absolute</u>	Vac	v	v	v	v	a	mAdc	ma	mAdc
<u>Maximum:</u>	6.3/10%	1300	650	-100	-200	6	750	20	5
<u>Test Cond.:</u>	6.3	—	—	0	—	—	—	—	—
<u>Ratings:</u>	-Ehk	/Ehk	Rg	Fl		T		tk	Alt
<u>Absolute</u>	V	V	Meg	cps		°C		sec(min)	ft
<u>Maximum:</u>	100	25	2.0	---		-75 to / 90		30	10,000
<u>Test Cond.:</u>	—	—	—	60		—		60	—

*Height: 4-5/8 in. maximum

*Diameter: 2-3/8 in. maximum

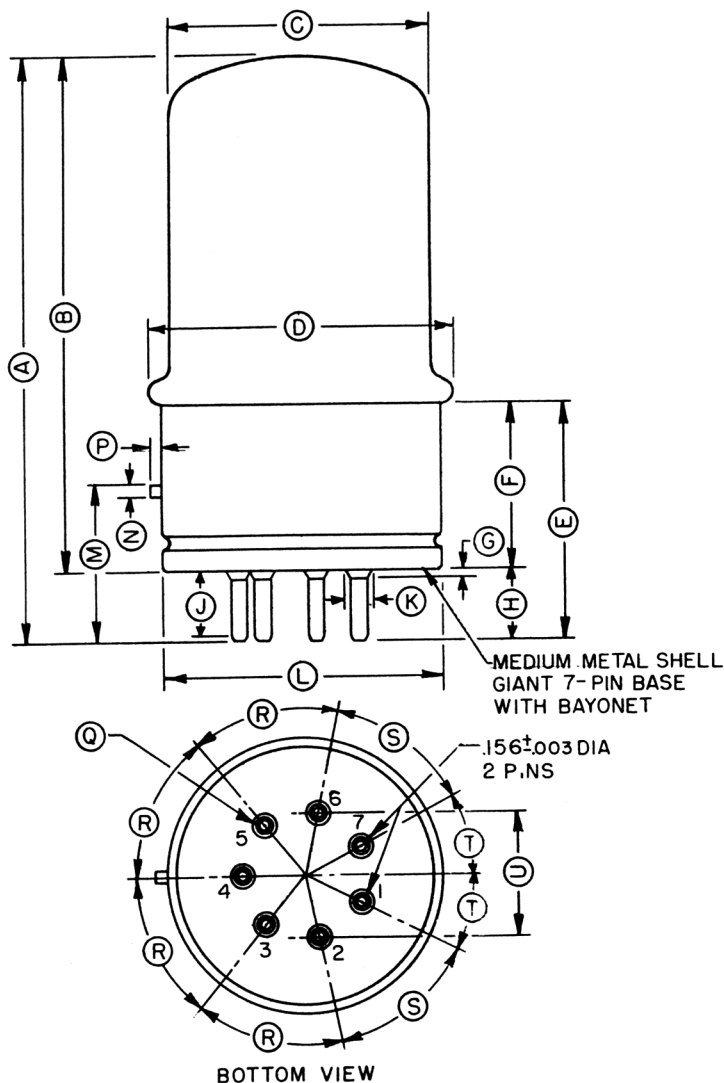
**Base: Medium Metal Shell with Ceramic
Insert, Giant 7-Pin Bayonet, A7-17

**Pin No.: 1 2 3 4 5 6 7 **Cathode: Coated Unipotential
Element h g2 k g1 g2 a h **Envelope: Per Outline

For miscellaneous requirements, see Paragraph 3.3, Inspection Instructions for Electron Tubes.

<u>Ref.</u>	<u>Test</u>	<u>Conditions</u>	<u>Min.</u>	<u>Max.</u>
4.5	Holding Period:	t=72 hrs		
4.9.18.1.6	Carton Drop:	(d) Package Group 1; Carton Size M		
4.9.19.3	*Bump:	Angle=20°		
4.9.19.2	*Vibration:	Note 1		
4.10.8	Heater Current:		If; 2.35	2.85 Aac
4.10.17.2	Anode Voltage:	Ecc=0;Rg=0.1Meg;Rp=2000	Epp: —	60 Vdc
4.10.19	Grid Voltage (1):	Epp=500Vac;Rg=2.0Meg;Rp=2000	Ecc: -4.4	-9.2 Vdc
4.10.19	*Grid Voltage (2):	Epp=500Vac;Rg=0.1Meg;Rp=2000; Note 2	Ecc: —	1.5 Vdc
4.10.19	*Grid Voltage (3):	Epp=500Vac;Rg=2.0Meg; Rp=2000;Note 3	Ecc: -4.4	-9.2 Vdc ←
4.10.19	*Grid Voltage (4):	Epp=500Vac;Rg=2.0Meg; Rp=2000;Note 4	Ecc: -4.4	-9.2 Vdc ←
---	*Grid Voltage Difference:	Note 5	ΔEcc: —	1.0 Vdc ←
4.10.13	*Operation:	Epp=1000Vac;Rp/Ib=750mAdc; Ecc=0;Rg=0.1Meg;t=30		
4.10.1.2	Peak Emission:	Epp=220Vac;Ib=12a;Note 6	etd: —	12.0 v
4.11	Life Test:	Group C;Epp=460Vac;Ib=750mAdc; Ik=4.7a;Rg=.05Meg;Resistance Load	t: 500	— hrs
4.11.4	Life Test End Point:	Peak Emission	etd: —	20.0 v

- Note 1: No voltages applied during vibration. Vibrate for 10 minutes. Tube to be vibrated so that the tube motion is along the shortest line between anode and cathode.
- Note 2: The difference in value of Ecc in the first and second grid-voltage tests shall not exceed the specified value.
- Note 3: Test to be made after two light taps with a standard No. 8 cork mallet in direction from cathode to anode.
- Note 4: Test to be made after two light taps with a standard No. 8 cork mallet in direction from anode to cathode.
- Note 5: The difference in value of Ecc in the third and fourth grid-voltage tests shall not exceed the specified value.
- Note 6: Tube shall be operated as a diode rectifier, with g2 and g1 tied to anode.
- Note 7: Reference specification shall be of the issue in effect on the date of invitation for bid.



REF	DIMENSIONS
*A	4 $\frac{5}{8}$ MAX
**B	4 MAX
**C	2 $\frac{1}{16}$ MAX
*D	2 $\frac{3}{8}$ MAX
**E	1.875 NOM
**F	1.338 NOM
**G	.065 MAX
**H	.562 MAX
**J	450 MIN
**K	.195 MAX
**L	2.146 - 2.188
**M	1.230 $\pm$.020
**N	.082 MAX
**P	.094 $\pm$.015
**Q	.125 $\pm$.003 DIA 5 PINS
**R	51°
**S	52°
**T	26°
**U	1.000 NOM