

MILITARY SPECIFICATION SHEET

ELECTRON TUBE, POWER

TYPE 4D32

The complete requirements for procuring the electron tube described herein shall consist of this document and the issue in effect of Specification MIL-E-1.

This specification is mandatory for use by all Departments and Agencies of the Department of Defense.

DESCRIPTION: Beam Power
 See figure 1
 Mounting position: Any
 Weight: 7.5 oz nom.

ABSOLUTE RATINGS: F1 = 30 MHz

Parameter: Unit:	Ef V	Eb Vdc	Ec1 Vdc	Ec2 Vdc	Ib mAdc
Maximum:					
C Teleg:	6.3 +5%	600	-200	350	300
C Teleg:	6.3 +5%	600	-200	350	300
AB2 Audio:	6.3 +5%	600	----	300	375
<u>TEST CONDITIONS:</u>	6.3	600	----	300	---

ABSOLUTE RATINGS:

Parameter: Unit:	Fg1 W	Fg2 W	Fp W	tk sec	Pi W	Emk V
Maximum:						
C Teleg:	0.75	10	50	120	150	+100
C Teleg:	0.75	14	50	120	150	+100
AB2 Audio:	0.75	8	50	120	150	+100
<u>TEST CONDITIONS:</u>	----	---	--	---	---	----

GENERAL

Qualification - Required

(B) Denotes changes

4D32

FSC 5960

METHOD	REQUIREMENT OR TEST	CONDITIONS	AQL PERCENT DEFECTIVE	INSPECTION LEVEL OR CODE	SYMBOL	LIMITS		UNIT
						Min	Max	
<u>Quality conformance inspection, part 1</u>								
(E) 1201	Short and discontinuity detection		0.4	II	---	---	---	---
1301	Heater current		0.65	II	If	3.35	4.15	A
1211	Electrode voltage (grid)	E _{c1} /I _b = 100 mAdc	0.65	II	E _{c1}	19	35	Vdc
1250	Electrode current (screen)	E _{c1} /I _t = 100 mAdc	0.65	II	I _{c2}	0	6	mAdc
1236	Power oscillation	E _b = 600V; E _{c2} = 300 V; I _{c1} = 10 mA; R _g = 5,000 ohms; P = 30 ± 2 MHz; I _t = 150 mAdc (maximum)	0.65	II	P _o	75	---	W useful
1231	Emission by oscillation		0.65	II	E _f	---	5.7	V
(B) 1330	Heater-cathode leakage		----	---	I _{hk}	---	250	μA _{dc}
<u>Quality conformance inspection, part 2</u>								
1031	Low-frequency vibration	E _b = 250 V; E _{c2} = 150 V; E _{c1} /I _b = 10 mA; R _p = 2,000 ohms	---	---	E _p	---	4.12	V
(B) 1042	Shock specified pulse	Test Condition A	---	---	---	---	---	---
1331	Direct-interelectrode capacitance		---	Code E	{ C _{gp} C _{in} C _{out}	{ --- 22 10	{ 0.40 30 16	{ pF pF pF
1316	Amplification factor	E ₁ to E ₂ ; E _{c2} = 300 Vdc; I _{c2} = 20 mA; t = 30 (max); anode grounded	---	---	M _u	5.0	15.0	
<u>Quality conformance inspection, part 3</u>								
----	Life-test provisions	Group C; power oscillation; t = 500 hours	---	---	---	---	---	---
----	Life-test end points	Emission by oscillation	---	---	E _f	---	6.0	V

Custodians:

Army - EL
Navy - EC
Air Force - 80

Preparing activity:

Air Force - 80

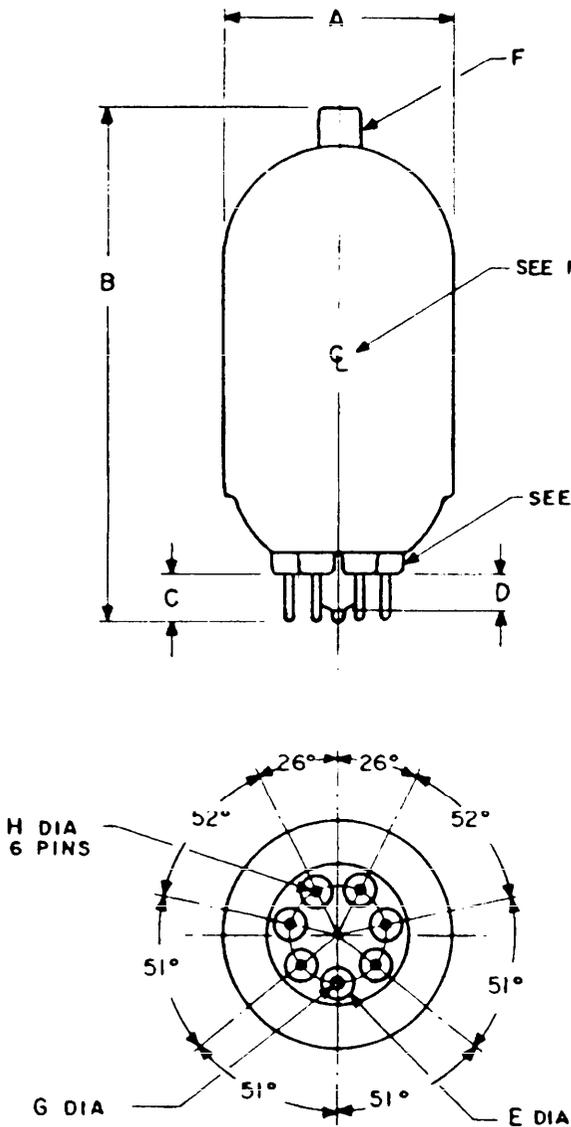
Review activities:

Air Force - 11, 17

(Project 5960-2454)

User activities:

Army - MU
Navy - MC, AS, OS, SH
Air Force - None



(B) PIN CONNECTIONS

PIN NO.	ELEMENT
1	h
2	g2
3	NC
4	k
5	k
6	g'
7	h
CAP	a

DIMENSIONS				
LTR	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
QUALITY CONFORMANCE INSPECTION, PART 2				
A	-	2.313	-	58.75
B	4.75	5.750	120.65	146.05
QUALITY CONFORMANCE INSPECTION, PT 3 (PERIODIC)				
C	.375	.500	9.53	12.70
D	-	.375	-	9.53
E	-	.375	-	9.53
G	.122	.128	3.10	3.25
H	.052	.060	1.32	1.52
F	CAP: C1-5			

NOTES: (B)

- a. MEDIUM MOULDED FLARE SEPTAR 7 PIN BASE. BASE PIN POSITIONS SHALL BE HELD TO TOLERANCES SUCH THAT THE BASE SHALL FIT A FLAT PLATE GAGE HAVING A THICKNESS OF .375 (9.53 MM) AND SIX .0805 (2.04 MM) - .0795 (2.02 MM) AND ONE .1455 (3.70 MM) HOLES LOCATED ON A 1.0005 (25.41 MM) - .9995 (25.39MM) DIA CIRCLE AT SPECIFIED CENTERS. THE COMPLETE LENGTH OF THE PIN SHALL, WITHOUT UNDUE FORCE, PASS INTO AND DISENGAGE FROM THE GAGE. QUALITY CONFORMANCE INSPECTION, PART 2.
- b. AXIS OF BASE PIN GAGE IS THE REFERENCE AXIS ε FOR TUBE SEATED FREELY IN GAGE.

FIGURE 1. Outline drawing of Electron Tube type 4D32

FOLD

POSTAGE AND FEES PAID
DEPARTMENT OF THE AIR FORCE

UNITED STATES AIR FORCE
OFFICIAL BUSINESS

SMAMA/MURPHY
Wright-Patterson AFB OH 45433

FOLD

SPECIFICATION ANALYSIS SHEET

Form Approved
Budget Bureau No. 22-R255

INSTRUCTIONS: This sheet is to be filled out by personnel, either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.

SPECIFICATION

ORGANIZATION

CITY AND STATE

CONTRACT NUMBER

MATERIAL PROCURED UNDER A

DIRECT GOVERNMENT CONTRACT

SUBCONTRACT

1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A. GIVE PARAGRAPH NUMBER AND WORDING.

B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES

2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID

3. IS THE SPECIFICATION RESTRICTIVE?

YES

NO (If "yes", in what way?)

4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)

SUBMITTED BY (Printed or typed name and activity - Optional)

DATE

DD FORM 1426
1 JAN 66

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED.

S/N-0102-014-1801

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