

MILITARY SPECIFICATION SHEET

ELECTRON TUBE, KLYSTRON

TYPE 726B

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

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

DESCRIPTION: Reflex oscillator, mechanically tuned, integral cavity, power output = 110 mW, frequency range 2,883 to 3,173 MHz

ABSOLUTE RATINGS:

Parameter:	Ef	Ers	Er	Ik	Alt
Unit:	V	Vdc	Vdc	mAdc	ft
Maximum:	6.8	330	-250	35	10,000
Minimum:	5.8	---	0	---	---

PHYSICAL CHARACTERISTICS:

Dimensions: See figure 1  
 Cathode: Unipotential

TEST CONDITIONS:

Parameter:	Ef	Ers	Er	F
Unit:	V	Vdc	Vdc	MHz
<u>Test condition 1:</u>				
Maximum:	---	---	-160	---
:	6.3	300	---	F2
Minimum:	---	---	-100	---
<u>Test condition 2:</u>				
Maximum:	---	---	-160	---
:	6.0	300	---	F2
Minimum:	---	---	-100	---
<u>Test condition 3:</u>				
Maximum:	---	---	-120	---
:	6.3	300	---	F1
Minimum:	---	---	-60	---

Frequency		
F	MHz	±
1	2,883	0.3%
2	3,173	0.3%

GENERAL:

Qualification - Required

METHOD	REQUIREMENT OR TEST	NOTES	TEST	CONDITIONS	SYMBOL	LIMITS		UNIT
						MINIMUM	MAXIMUM	
4027	<u>Qualification inspection</u>							
	Temperature coefficient	---	---		$\Delta F/\Delta T$	-0.10	+0.10	MHz/°C
1031	High-frequency vibration	---	---		---	---	---	---
	<u>Quality conformance inspection, part 1</u>	1	---					
4250	Power level (output)	---	2		Po	110	---	mW
1256	Electrode current (cathode)	---	1		$\bar{I}_k$	---	30	mA <sub>dc</sub>
4223	Mechanical tuning range	---	1		F	3,173	---	MHz
		---	3		F	---	2,883	MHz
4214	Cathode emission	---	1	E <sub>f</sub> = 5.8 V	$\Delta I_k$	---	5.0	mA <sub>dc</sub>
4229	Total reflector current	---	1		I <sub>r</sub>	---	7.0	$\mu$ A <sub>dc</sub>
4229	Reflector-leakage current	---	1		I <sub>r</sub>	---	5.0	$\mu$ A <sub>dc</sub>
4229	Reflector-gas current	---	1		I <sub>r</sub>	---	2.0	$\mu$ A <sub>dc</sub>
	<u>Quality conformance inspection, part 2</u>							
1336	Heater-cathode leakage	---	1	E <sub>hk</sub> = ±45 Vdc	I <sub>hk</sub>	0	50	$\mu$ A <sub>dc</sub>
1301	Heater current	---	1		I <sub>f</sub>	410	470	mA
4280	Electronic tuning range	---	1	E <sub>r</sub> 50°C max P <sub>o</sub>	$\Delta F$	25	---	MHz
1211	Insulation of electrodes	---	---	300 Vdc; tube cold	R <sub>k-rs</sub>	2.0	---	Meg
4231	Electronic tuning hysteresis (2)	---	1		---	---	5.0	%
	<u>Quality conformance inspection, part 3</u>							
4551	Life test	---	1	Group B	t	500	---	hrs
---	Life-test end point:							
4250	Power level (output)	---	2		Po	50	---	mW

NOTE:

1. Unless otherwise specified, the AQL for all tests listed under quality conformance inspection, part 1, shall be 1.0 percent, inspection level II.

Custodians:  
Army - EL  
Navy - EC  
Air Force - 80

Preparing activity: Navy - EC

Agent: DSA - ES

(Project 5960-2425-56)

Review activities:  
Army -  
Air Force - 11  
DSA - ES

User activities:  
Army - WC, AV  
Navy - AS, OS, MC, CG, SH

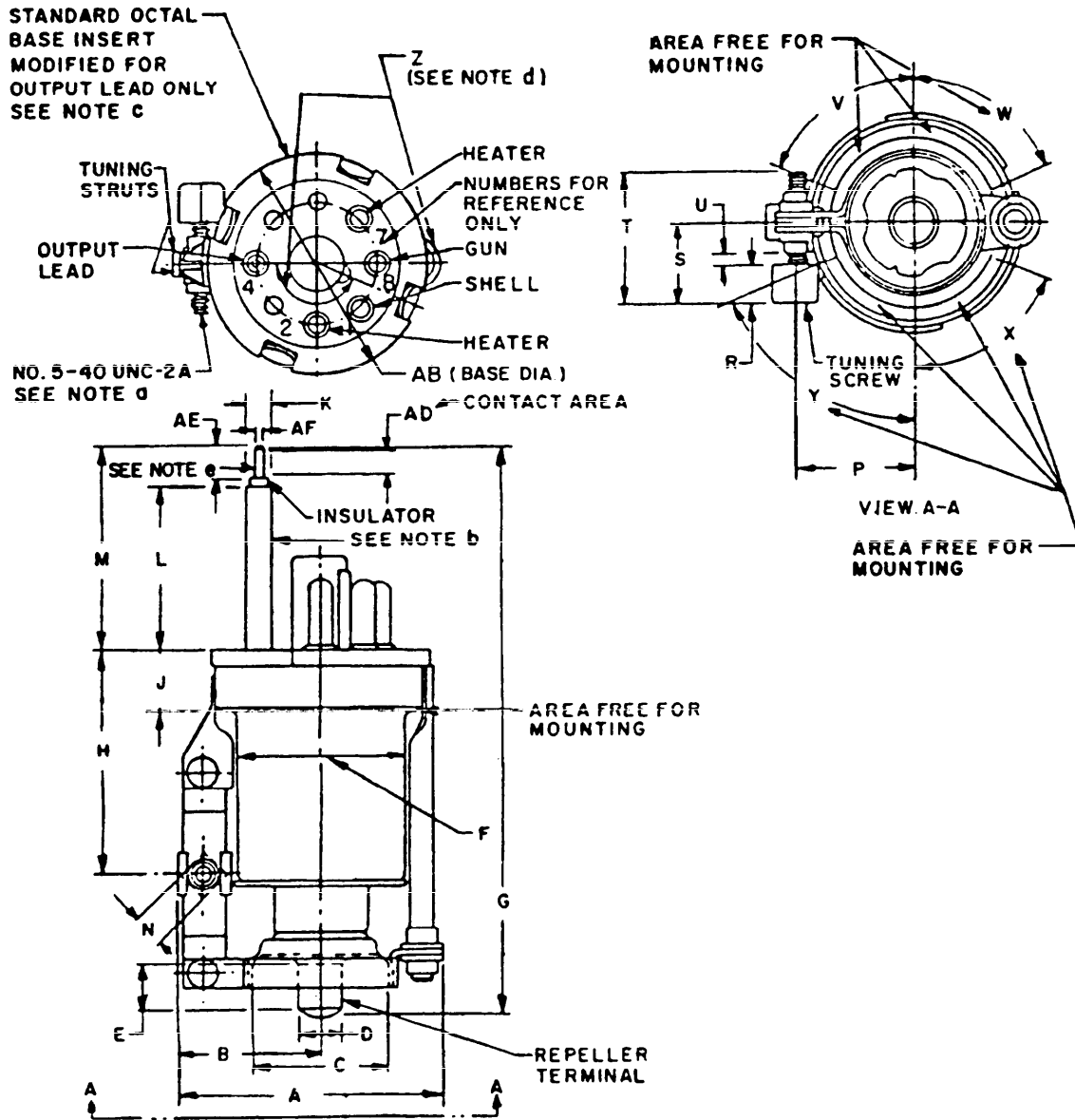


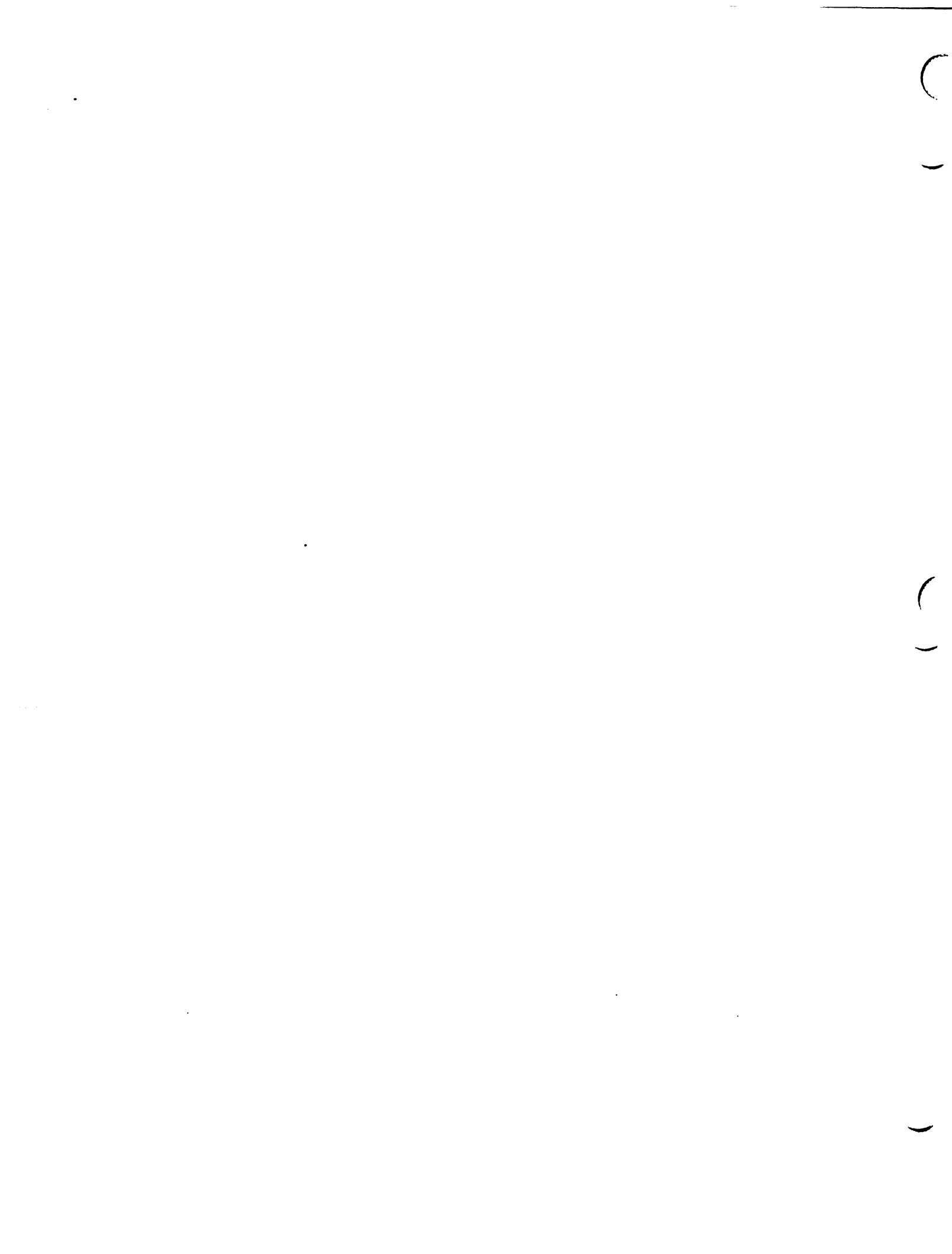
FIGURE 1. Outline drawing of electron tube type 726B.

Ltr	Dimensions in inches with metric equivalents (mm) in parentheses		Ltr	Dimensions in inches with metric equivalents (mm) in parentheses	
	Minimum	Maximum		Minimum	Maximum
Qualification inspection			Quality conformance inspection, part 2		
C	.767 (19.48)	.797 (20.24)	A		1.609 (40.87)
E	.240 (6.10)		B		.859 (21.82)
T	.766 (19.46)	.797 (20.24)	D	.245 (6.22)	.255 (6.48)
AB	1.266 (32.16)	1.297 (32.94)	F	1.000 (25.40)	1.016 (25.81)
V		70°	G	3.250 (82.55)	3.500 (88.90)
W		70°	N	.187 (4.75) ± .005 (.13) square	
X		70°	R	.203 (5.16)	.234 (5.94)
Y		70°	S	.484 (12.29)	.516 (13.11)
Quality conformance inspection, part 1			U		.116 (2.95)
H	1.313 (33.35)	1.437 (36.50)			
J	.330 (8.38)	.400 (10.16)			
K	.138 (3.51)	.142 (3.61)			
L	.875 (22.23)	.984 (24.99)			
M	1.203 (30.56)	1.234 (31.34)			
P	.656 (16.66)	.719 (18.26)			
Z	154.5°	160.5°			
AD	.156 (3.96) Nom				
AE	.172 (4.37)	.203 (5.16)			
AF	.035 (.89)	.045 (1.14)			

## NOTES:

- The tuning screw shall be lubricated with oil-dag or equivalent non-corrosive lubricant. It shall be capable of being operated smoothly through its entire range without perceptible binding.
- Nickel (30 MSI silver plate permissible).
- This base shall be capable of being inserted in a gage 1.219 (30.96 mm) thick having 4 holes .25 (6.35 mm) deep from the top of the gage with diameters of .103 (2.62 mm) for the contact pins. Remaining portion of hole to be clearance, approximately .0156 (.40 mm) larger in diameter .160 x 1.219 (4.06 x 30.96 mm) deep for the output lead. All holes located on the true centers. Also locate a center hole having the contour of the pilot, but with a clearance of .002 (.05 mm) over the maximum diameter.
- Applies to centerline passing through center of output lead and midway between tuning struts.
- Shall be concentric with each other within .010 (.25 mm).
- Base is phenolic wafer.

FIGURE 1. Outline drawing of electron tube type 726B - Continued.



FOLD

---

DEPARTMENT OF THE NAVY  
NAVAL ELECTRONIC SYSTEMS COMMAND  
WASHINGTON, D. C. 20360

POSTAGE AND FEES PAID  
NAVY DEPARTMENT

OFFICIAL BUSINESS

COMMANDER  
NAVAL ELECTRONIC SYSTEMS COMMAND  
DEFENSE STANDARDIZATION PROGRAM BRANCH  
DEPARTMENT OF THE NAVY  
WASHINGTON, D. C. 20360

---

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      C-25254