

MILITARY SPECIFICATION SHEET

ELECTRON TUBE, RECEIVING

TYPE 6CL6

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: Pentode, miniature, power amplifier

- Ⓔ Outline --- 6-3 (EIA)
- Base --- E9-1
- Envelope --- T6-1 2
- Cathode --- Coated unipotential

Base connections:

Pin No.	---	1	2	3	4	5	6	7	8	9
Element	---	k	g1	g2	h	h	a	g3, sd	g2	g1

ABSOLUTE-MAXIMUM RATINGS:

Parameter:	Ef	Eb	Ec1	Ec2	Ec3	Ehk	Ik	Pp	Pg2	TE	Alt
Unit:	V	Vdc	Vdc	Vdc	Vdc	v	mAdc	W	W	°C	ft
Maximum:	6.9	330	0, -50	330	0	100	50	8.2	1.9	220	Note 1
Minimum:	5.7	---	---	---	---	---	---	---	---	---	---

TEST CONDITIONS: 6.3 250 -3 150 0 0 --- --- --- --- ---

GENERAL:

Qualification - Not required

Ⓔ denotes changes

6CL6

METHOD	REQUIREMENT OR TEST	NOTES	CONDITIONS	AQL (PERCENT DEFECTIVE)	INSPECTION LEVEL OR CODE	SYMBOL	LIMITS		UNIT
							MIN	MAX	
<u>Quality conformance inspection, part 1</u>									
1266	Total grid current	2	Rg1 = 0.25 Meg	0.65	II	Ic1	0	-2.0	μAdc
1256	Electrode current (1) (anode)	-		0.65	II	Ib	20	40	mAdc
1256	Electrode current (2) (anode)	-	Fb = 50 Vdc; Ec1 = 0; Ec2 = 100 Vdc	0.65	II	Ib	26	46	mAdc
1256	Electrode current (3) (anode)	-	Ec1 = -13 Vdc	0.65	II	Ib	---	300	μAdc
1306	Transconductance (1)	-		0.65	II	Sm	9.200	14.000	μmhos
1231	Emission	-	Eb = Ec1 = Ec2 = 20 Vdc	0.65	II	Is	180	---	mAdc
(E) 1201	Short and discontinuity detection	-		0.4	II	---	---	---	---
<u>Quality conformance inspection, part 2</u>									
1211	Insulation of electrodes	-		4.0	S3	R	100	---	Meg
1301	Heater current	-		4.0	S3	If	610	690	mA
1301	Heater-cathode leakage	-		4.0	S3	Ihk	---	40	μAdc
1256	Electrode current (screen)	-		4.0	S3	Ic2	---	9.0	mAdc
1306	Transconductance (2)	-	Ef = 5.5 V	---	---	Sm	8.700	---	μmhos
1341	Power output	3	Esig = 2.1 Vac; Rp = 7,500 ohms	---	---	Po	2.0	---	W
1246	Audio frequency noise	-	Esig = 100 mVac; Ebb = 225 Vdc; Ecc2 = 225 Vdc; Ec1 = 0; Rk = 150 ohms; Rp = 10,000 ohms; Rg1 = 0.25 Meg; Rg2 = 5,000 ohms; Cg2 = 0	2.5	S3	EB	---	17	vu
1331	Direct-interelectrode capacitance	-	No shield	---	---	{ Cg1p Cin Cout	{ --- 9.0 3.9	{ 0.12 13.6 7.2	{ pF pF pF
1031	Low-frequency vibration	-	Rp = 2,000 ohms	---	---	Ep	---	1,000	mVac
(E) 1121	Base strain	-		---	---	---	---	---	---
(E) 2126	Glass strain	-		---	---	---	---	---	---
(E) 1105	Permanence of marking	-		---	---	---	---	---	---
<u>Quality conformance inspection, part 3</u>									
1501	Intermittent life	-	Group A; Ehk = +180 Vdc; Rg1 = 0.25 Meg	---	---	---	---	---	---

METHOD	REQUIREMENT OR TEST	NOTES	CONDITIONS	AQL (PERCENT DEFECTIVE)	INSPECTION LEVEL OR CODE	SYMBOL	LIMITS		UNIT
							MIN	MAX	
	<u>Quality conformance inspection, part 3</u> -Continued								
---	Intermittent life-test end point (500 hours):								
1306	Transconductance (1)	-		---	---	Sm	8,000	---	μmhos

NOTES:

1. See "Reduced pressure (altitude) rating", and altitude, maximum peak voltage in the basic document.
2. This test to be performed at the conclusion of the holding period.
3. Place 300-ohm resistor in series with grid No. 1 lead as close to grid pin as possible.

Custodians:

Army - EL
Navy - EC
Air Force - 80

Preparing activity: Navy - EC

Agent: DSA - ES

(Project 5960-2611)

Review activities:

Air Force - 11, 17
DSA - ES
Army - MI, MU

User activities:

Army - WC
Navy - AS, OS, MC, CG, SH

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.

AFLC-WPAFB-OCT 67 2M