

MIL-E-1 1245B
 3 December 1968
 SUPERSEDING
 MIL-E-1/1245A
 2 May 1960

MILITARY SPECIFICATION SHEET

ELECTRON TUBE, RECEIVING

TYPE 6CB6A ^{1/}

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, RF sharp cutoff

Outline --- 5-2 (EIA) (B)
 Base --- E7-1
 Envelope --- T5-1/2
 Cathode --- Coated unipotential

Base connections:

Pin No.	---	1	2	3	4	5	6	7	
Element	---	g1	k	h	h	a	g2	g3	and internal shield (see note 1)

ABSOLUTE-MAXIMUM RATINGS:

Parameter:	Ef	Fb	Ec1	Ec2	Ec3	Ehk	Rk	Pp	Pg2	(B) Alt
Unit:	V	Vdc	Vdc	Vdc	Vdc	v	Ohms	W	W	ft
Maximum:	6.9	330	---	165	---	100	---	2.3	0.55	(see note 3)
Minimum:	5.7	---	---	---	---	---	---	---	---	---

TEST CONDITIONS: 6.3 125 0 125 0 --- 56 --- ---

GENERAL:

Qualification - Required

^{1/} See note 4

(B) denotes changes

METHOD	REQUIREMENT OR TEST	CONDITIONS	AQ. (PERCENT DEFECTIVE)	INSPECTION LEVEL OR CODE	SYMBOL	LIMITS		UNIT
						MIN	MAX	
<u>Quality conformance inspection, part 1</u>								
1231	Emission	$E_b = E_{c1} = E_{c2} = E_{c3} = 10 \text{ Vdc}; R_k = 0$ (see note 2)	0.65	II	I _s	35	---	mAdc
1256	Electrode current (1) (anode)		0.65	II	I _b	8.0	18.0	mAdc
1266	Total grid current	$R_{g1} = 0.25 \text{ Meg}; E_b = 200 \text{ Vdc}; E_{c2} = 150 \text{ Vdc}; R_k = 56; E_{c1} = -1.5 \text{ Vdc}$ (see note 2)	0.65	II	I _{c1}	0	-1.0	μAdc
1306	Transconductance (1)		0.65	II	S _m	6,000	10,000	μmhos
1201	Short and discontinuity detection		0.4	II	---	---	---	---
<u>Quality conformance inspection, part 2</u>								
1211	Insulation of electrodes		4.0	S3	R	10	---	Meg
1031	Low-frequency vibration	$E_b = 200 \text{ Vdc}; E_{c2} = 150 \text{ Vdc}; R_p = 2,000; R_k = 0; E_{c1} = -2 \text{ Vdc}$	6.5	S3	E _p	---	250	mVac
1256	Electrode current (2) (anode)	$R_k = 0; E_{c1} = -6.5 \text{ Vdc}$	4.0	I	I _b	---	600	μAdc
1256	Electrode current (screen-grid)		6.5	S3	I _{c2}	---	6.0	mAdc
1301	Heater current		6.5	S3	I _f	275	325	mA
1306	Transconductance (2)	$E_f = 5.7 \text{ Vdc}$	6.5	S3	S _m	5,200	---	μmhos
1331	Direct interelectrode capacitance	Shield No. 316	6.5	S3	{ C _{g1-p} C _{in} C _{out}	{ --- 5.0 2.1	{ 0.015 8.0 3.5	{ pF pF pF
1336	Heater-cathode leakage	$E_{hk} = -100 \text{ Vdc}$	6.5	S3	I _{hk}	---	20	μAdc
1121	Base strain		---	---	---	---	---	---
2126	Glass strain		4.0	I	---	---	---	---
1105	Permanence of marking		---	---	---	---	---	---
ⓑ 1369	Heater warmup		6.5	S3	t	6.8	15	sec

METHOD	REQUIREMENT OR TEST	CONDITIONS	ADJ. (PERCENT) DEFECTIVE	INSPECTION LEVEL OR CODE	SYMBOL	LIMITS		UNITS
						MIN	MAX	
	<u>Quality conformance inspection, part 3</u>							
1501	Intermittent life	Group A: E _{hk} = 180 Vdc; E _h = 300 Vdc; E _{c2} = 150 Vdc; R _k = 270	---	---	---	---	---	---
---	Life-test end point (intermittent) (500 hours)	Transconductance (1)	---	---	Sm	4,800	---	μmhos

NOTES:

1. Grid no. 3 has not been designed for control or gating purposes.
2. This test to be performed at the conclusion of the holding period.
3. See "Reduced pressure (altitude) rating," and altitude, maximum peak voltage. (B)
4. The tube described by this TSS is a substitute for tube type 6CB6, MIL-E-1/1245A.

Custodians:

Army - EL
Navy - EC
Air Force - 05

Preparing activity:
Navy - EC

(Project 5960-2223-37)

Review activities:

Army - EL
Navy - SH
Air Force - 11, 17, 85
DSA - ES

User activities:

Army - MU
Navy - AS, OS, MC CG
Air Force - 19