

MILITARY SPECIFICATION SHEET

ELECTRON TUBE, RECEIVING

TYPE 5842

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

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

DESCRIPTION: Triode, miniature, medium Mu, grounded grid

Outline --- 6-1 (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	---	a	nc	h	a	g	k	g	q	h

ABSOLUTE-MAXIMUM RATINGS:

Parameter:	E _f Unit: Maximum:	E _b Vdr 200	E _c Vdr	R _K Ohms	I _k mAdc	P _p W	E _{hk} v	C _k .F	T _E °C	Alt ft
	5.7	---	---	---	---	4.5	55	---	130	Note 2
							---	---	---	---

TEST CONDITIONS: 6.3 150 0 60 --- --- --- Note 1 --- ---

GENERAL:

Qualification - Required

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>									
1256	Electrode current (1) (anode)	-		0.65	II	Ib	15.0	30.0	mAdc
1256	Electrode current (2) (anode)	-	$E_C = -10$ Vdc	0.65	II	Ib	---	100	Adc
1266	Total grid current	3,4		0.65	II	Ic	0	-0.5	Adc
1306	Transconductance (1)	-		0.65	II	Sm	20,000	30,000	umhos
1306	Transconductance (2)	4	$E_F = 5.7$ V	0.65	II	CSm	---	'2	z
1201	Short and discontinuity detection	-		0.4	II	---	---	---	---
<u>Quality conformance inspection, part 2</u>									
1211	Insulation of electrodes	-		4.0	S3	---	---	---	---
1031	Low-frequency vibration	-	$R_D = 2,000$ ohms; $R_K = 0$; $E_C = -2.0$ Vdc	---	---	Ep	---	500	mVac
1336	Heater-cathode leakage	-		---	---	Ihk	---	20	Adc
1301	Heater current	-		---	---	If	280	320	mA
1316	Amplification factor	-		---	---	Mu	35	55	---
1331	Direct-interelectrode capacitance	-	Without external shield	6.5	Code E	Ck-gh Cp-kh Cp-gh	8.0 ---	10.0 0.55 1.95	pF pF pF
2126	Glass strain	-		4.0	I	---	---	---	---
1121	Base strain	-		---	---	---	---	---	---
1105	Permanence of marking	-		---	---	---	---	---	---
<u>Quality conformance inspection, part 3</u>									
1501	Intermittent life	5	Group A; $E_{hk} = 55$ V; $TE = 130^\circ C$	---	---	---	---	---	---
---	Intermittent life-test end points (500 hours):								
1306 1266	Transconductance (1) Total grid current	-		---	---	Sm Ic	16,000 ---	---	umhos uAdc

NOTES:

1. The reactance of the cathode by-pass capacitor shall be 0.5-ohm maximum at the test frequency.
2. See "Reduced pressure (altitude) rating" paragraph in the basic document.
3. Approved alternate test: The insertion of a 0.47 megohm resistor in series with the grid shall not change the anode current by more than 3.0 mAdc.
4. This test to be performed at the conclusion of the holding period.
5. Envelope temperature (TE) requirements, when measured in accordance with the temperature by conduction-band measurement (method 1226), will be satisfied if a tube having bogey Ib (± 5 percent) under normal test conditions, is determined to operate at or above minimum specified temperature at any position in the life-test rack.

Custodians:

Army - EL
Navy - EC
Air Force - 85

Review activities:

Army - MU
Air Force - 11, 17, 80
DSA - ES

User activities:

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

Preparing activity:
Navy - EC

Agent:
DSA - ES

(Project 5960-2911)