

INCH-POUND

MIL-PRF-1/985D
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SUPERSEDING
MIL-PRF-1/985C
10 May 2007

PERFORMANCE SPECIFICATION SHEET

ELECTRON TUBE, RECEIVING

TYPE 5U4GB

Inactive for new design
after 21 July 1997.

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

The requirements for acquiring the electron tube described
herein shall consist of this specification sheet and MIL-PRF-1.

DESCRIPTION: Rectifier, full wave, high vacuum.

Outline --- 12-16.
Base --- B5-121.
Envelope --- T12.
Cathode --- Coated filament.

Base connections:

Pin no.	---	1	2	3	4	5	6	7	8
Element	---	nc	f	---	2a	---	1a	---	f

ABSOLUTE RATINGS:

Parameter:	Ef	Epp/a	epx	ib	Io	R1	CL	i(surge)	Alt
Unit:	V ac	V ac	v	ma	mA dc	Ohms	μF	a	ft
Maximum:	5.5	---	1,700	1,100	300	---	---	5.0	10,000
Minimum:	4.5	---	---	---	---	---	---	---	---
Test conditions:	5.0	550	---	---	---	1,950	10	---	---

GENERAL:

Qualification - Not required.

This specification sheet uses accept on zero defect sampling in accordance with MIL-PRF-1, table III.

TABLE I. Requirements and tests.

Requirement or test	MIL-STD-1311 method	Conditions	Symbol	Limits		Unit
				Min	Max	
<u>First article test</u>						
Low-frequency vibration	1031	No voltages	---	---	---	---
<u>Conformance inspection, part 1</u>						
Operation of rectifiers (1)	1353	See notes 2 and 3	lo	285	---	mA dc
Emission	1231	Eb = 75 V dc See note 4	ls	350	---	mA dc
<u>Conformance inspection, part 2</u>						
Alignment	---	See note 5	---	---	---	---
Filament current	1301		If	2.7	3.3	A
Operation of rectifiers (2)	1353	Ef = 4.5 V ac	$\frac{\Delta Io}{If}$	---	10	%
Insulation of electrodes	1211		---	---	---	---
Secureness of base, cap, or insert	1101		---	---	---	---
Permanence of marking	1105		---	---	---	---
<u>Conformance inspection, part 3</u>						
Life-test provisions	---	Group B, see note 6	---	---	---	---
Life-test end point (500 hours)	---					
Operation of rectifiers (1)	1353		lo	275	---	mA dc

NOTES:

1. Tube shall be operated in a vertical position. Tube may be mounted in a horizontal position provided pins no. 2 and 4 are in a vertical plane.
2. In a full-wave circuit Zp/a shall be adjusted such that a tube having Etd = 44 V dc at 225 mA dc per anode gives lo = 300 mA dc.
3. This test shall be performed at the conclusion of the holding period.
4. Test each section separately. Anode voltage = 0 for section not under test.
5. The plane of the filament shall be parallel to the plane passing through the centerline of pins No. 2 and 4 within $\pm 22.5^\circ$.
6. The values of R1 and CL given in test conditions may be considered as approximate and shall be adjusted initially to give lo = 300 mA dc with $ib \geq 1.1A$.

Referenced documents. In addition to MIL-PRF-1, this specification sheet references MIL-STD-1311.

The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Custodians:
Army - CR
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5960-2014-015)

Review activities:
Army - AR, CR4, MI
Navy - AS, CG, MC, OS, SH
Air Force - 99

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