

INCH-POUND

MIL-PRF-1/1617D
22 August 2014
SUPERSEDING
MIL-PRF-1/1617C
30 January 1998

PERFORMANCE SPECIFICATION SHEET

ELECTRON TUBE, RECEIVING
TYPE 5847A

Inactive for new design
after 29 January 2008.

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 document and the latest issue of MIL-PRF-1.

DESCRIPTION: Pentode, miniature, high gain.

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	g1	nc	h, lower int sd	k, g3 upper int sd	nc	a	nc	g2	h

ABSOLUTE RATINGS: F1= 150 MHz

Parameter: Unit:	Ef V	Eb V dc	Ec1 V dc	Ec2 V dc	Rk ohms	lk mA dc	Pp W	Pg2 W	Ehk V	TE °C	Alt ft
Maximum:	6.9	200	---	165	---	40	3.3	0.85	100	155	1/ ---
Minimum:	5.7	---	---	---	---	---	---	---	---	---	---
Test conditions:	6.3	150	0	150	110	---	---	---	---	---	---

See footnotes at end of table I.

GENERAL:

Qualification: Not required. 2/

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

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TABLE I. Testing and inspection.

Inspection	MIL-STD-1311 Method	Conditions	Symbol	Limits		Unit
				min	max	
<u>Conformance inspection, part 1</u>						
Total grid current <u>3/ 4/</u>	1266		Ic1	0	-0.2	μA dc
Electrode current (1) (anode)	1256		Ib	9.0	19.0	mA dc
Electrode current (2) (anode)	1256	Ec1 = -10 V dc	Ib	---	50	μA dc
Electrode current (screen)	1256		Ic2	---	6.0	mA dc
Transconductance (1)	1306		Sm	10,000	18,000	μmhos
Transconductance (2)	1306	Ef = 5.7 V	ΔSm Ef	---	15	%
Transconductance (3)	1306	Eb = Ec2 = 150 V; Rk = 4,000 ohms; Ec1 = +2.5 V dc	Sm	2,600	3,700	μmhos
Transconductance (4)	1306	Eb = Ec2 = 150 V; Rk = 4,000 ohms; Ec1 = +20 V dc	Sm	6,500	9,450	μmhos
Short and discontinuity detection	1201		---	---	---	---
<u>Conformance inspection, part 2</u>						
Low-frequency vibration	1031	Rp = 2,000 ohms	Ep	---	500	mV ac
Heater current	1301		If	280	320	mA
Heater-cathode leakage	1336		Ihk	---	20	μA dc
Direct-interelectrode capacitance	1331	Shield no. 315	Cgp Cin Cout	---	0.06 7.7 3.3	pF pF pF
Insulation of electrodes	1211		R	200	---	Meg
Base strain	1121		---	---	---	---
Envelope strain	2125		---	---	---	---
Permanence of marking	1105		---	---	---	---
<u>Conformance inspection, part 3</u>						
Intermittent life	1501	Group A; Ehk = 100 V	---	---	---	---
Intermittent life-test end-points (500 hours):						
Transconductance (1)	1306		Sm	8,500	---	μmhos
Total grid current <u>3/</u>	1266		Ic1	---	-0.25	μA dc
Transconductance (3)	1306	Eb = Ec2 = 150 V; Rk = 4,000 ohms; Ec1 = +2.5 V dc	ΔSm t	---	-5	%
Insulation of electrodes	1211		R	50	---	MegΩ

See footnotes at end of table.

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NOTES:

- 1/ See "Reduced pressure (altitude) rating", and altitude, maximum peak voltage in the basic document.
- 2/ Tubes shall perform satisfactorily in Nike-Hercules Intermediate-Frequency (IF) Amplifier GS-19787 or equivalent.
- 3/ The following test is approved as an alternate for this test. The insertion of a 0.47 Meg Ω resistor in the grid circuit shall not change the anode current by more than 0.5 mA dc.
- 4/ This test shall be performed at the conclusion of the holding period.

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 5960-2014-017)

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

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil/>.