

INCH-POUND

MIL-PRF-1/334D
6 March 2015
SUPERSEDING
MIL-PRF-1/334C
1 October 2003

PERFORMANCE SPECIFICATION SHEET

ELECTRON TUBE, RECEIVING
TYPE 2C53

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: High-Mu triode.

Outline --- See figure 1.
Base --- B8-26.
Cap --- C1-1.
Envelope --- T9.
Cathode --- Coated unipotential.

Base connections:

Pin no.	1	2	3	4	5	6	7	8	Cap
Element	sd and base sleeve	h	nc	nc	g	nc	h	k	a

ABSOLUTE-MAXIMUM RATINGS:

Parameter:	Ef	Eb	Ec	Pp	Ehk	Rk	Alt
Unit:	V	V dc	V dc	W	v	Ohms	ft
Maximum:	6.9	8,000	-200	12	300	---	note 1
Minimum:	5.7	---	---	---	---	---	note 1
Test conditions:	6.3	8,000	0	---	300	9,600	---

GENERAL:

Qualification - Required.

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



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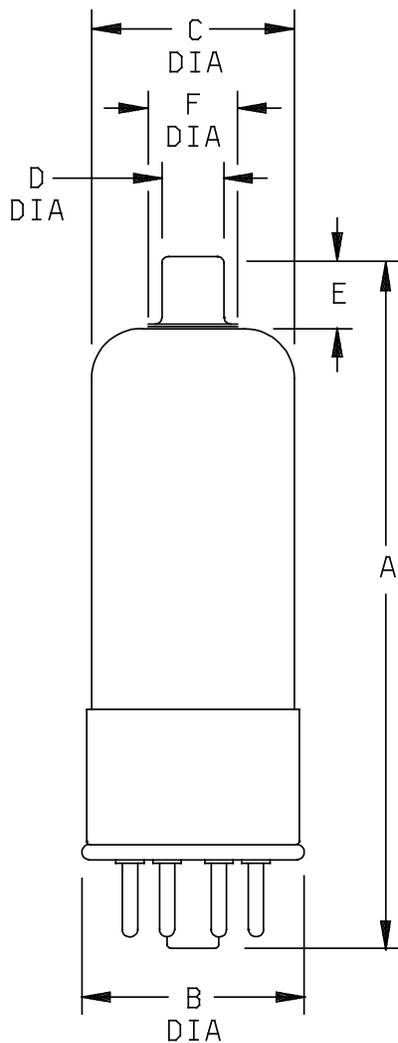
TABLE I. Testing and inspection.

Inspection	Method MIL-STD-1311	Conditions	Symbol	Limits		Unit
				Min	Max	
<u>Conformance inspection, part 1</u>						
Total grid current	1266	Eb = 6,000 V, see note 2	Ic	0	-0.5	μA dc
Emission	1231	Eb = Ec = 30 V dc, see note 2	Is	32	---	mA dc
Electrode current (cathode)	1256	T = 60; Eb = 6,000 V, see note 3	Ik	0.9	1.6	mA dc
Short and discontinuity detection	1201		---	---	---	---
<u>Conformance inspection, part 2</u>						
Heater current	1301		If	275	325	mA
Heater-cathode leakage	1336		Ihk	---	30	μA dc
Transconductance	1306	Eb = 1,500 V dc; Ec = -1 V dc; Rk = 0	Sm	675	1,125	μmhos
Amplification factor	1316	Eb = 1,500 V dc; Ec = -1 V dc; Rk = 0	Mu	380	520	---
Direct-interelectrode capacitance	1331	No shield	Cgp Cin Cout	0.60 4.0 1.2	0.90 6.0 2.6	pF pF pF
Insulation of electrodes	1211		---	---	---	---
Low-frequency vibration	1031	Eb = 300 V dc; Ec = 0; Rp = 10,000 Ω	Ep	---	200	mV ac
Base pin solder depth	1111		---	---	---	---
Secureness of base, cap, or insert	1101		---	---	---	---
Permanence of marking	1105		---	---	---	---
<u>Conformance inspection, part 3</u>						
Life-test provisions	---	Group C; Ehk = 300 V	---	---	---	---
Life-test end point (500 hours)	---	Electrode current (cathode)	Ik	0.75	---	mA dc

NOTES:

1. See "Reduced pressure (altitude) rating," and altitude maximum peak voltage.
2. This test to be performed at the conclusion of the holding period.
3. Initial arcing may be tolerated, but tubes shall be free of arcing at the conclusion of the test.

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Dimensions in inches with metric equivalents (mm) in parentheses.		
Ltr	Minimum	Maximum
Conformance inspection, part 2		
A	3.500 (88.90)	3.875 (98.43)
B		1.312 (33.32)
Conformance inspection, part 3 (periodic-check)		
C	1.062 (26.97)	1.188 (30.18)
D	0.355 (9.02)	0.365 (9.27)
E	0.406 (10.31) Nominal	
F	0.420 (10.67) Nominal	

FIGURE 1. Outline drawing of electron tube type 2C53.

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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 5960-2015-026)

Review activities:

Army - MI
Navy - AS, CG, MC, OS
Air Force - 19, 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/>.