

INCH-POUND

MIL-PRF-1/1542C
4 August 2009
SUPERSEDING
MIL-PRF-1/1542B(USAF)
18 June 1999

PERFORMANCE SPECIFICATION SHEET

ELECTRON TUBE, POWER
TYPE 7402

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 vacuum clipper diode or rectifier.

Outline: See figure 1.

Mounting: Vertical position, base down.

Weight: 14.3 ounces nominal.

ABSOLUTE RATINGS:

Parameter: Unit:	Ef V ac	epx kv	ib a	Ib mA dc	Ieff A ac	Pp W
Clipper						
Maximum:	12.1	33	50	---	1.25	450
Minimum:	10.9	---	---	---	---	---
Rectifier						
Maximum:	12.1	33	2.7	860	---	450
Minimum:	10.9	---	---	---	---	---
Test condition:	11.5	---	---	---	---	---

General:

Qualification - Not required.

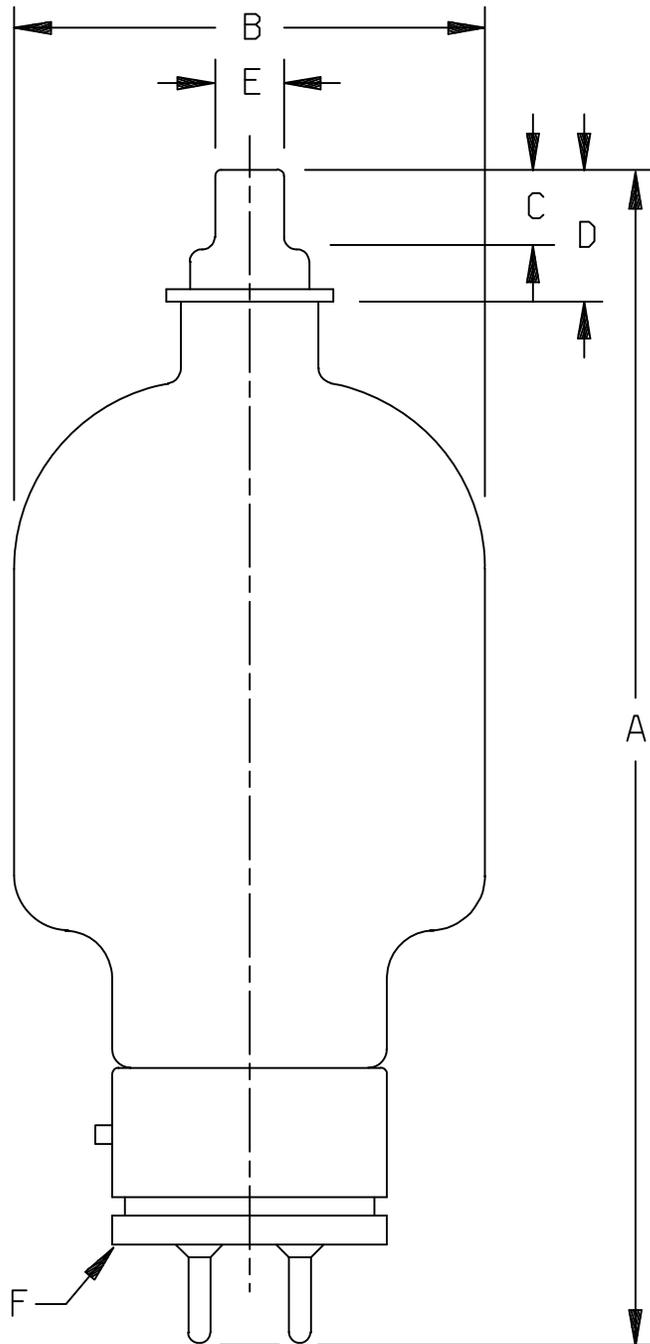
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TABLE I. Testing and inspection.

Inspection	Method MIL-STD-1311	Condition	Acceptance Level	Symbol	Limits		Unit
					Min	Max	
<u>Conformance inspection, part 1</u>							
Filament current	1301		0.65	If	14.75	16.25	A ac
Peak emission	1231	eb = 8.0 kv	0.65	is	30	---	a
Electrode current (anode)	1256	Eb = 330 V dc	0.65	lb	860	---	mA dc
Operation of rectifiers	1353	epx = 33 kv; ib = 2.7 a lb = 860 mA dc <u>1/</u>	0.65	---	---	---	---
<u>Conformance inspection, part 2</u>							
Low-frequency vibration	1031	No voltages	6.5	---	---	---	---
Shock	1041	Hammer angle 25°	---	---	---	---	---
Operation	---	epx = 33 kv tp = 1 μsec; Zo = 53 ohms; Rs = 300 ohms (min); Prr = 340 R1 = 0 <u>1/</u> <u>2/</u>	---	ib	50	---	a
<u>Conformance inspection, part 3</u>							
Life test provisions	---	Group D; operation of rectifiers	---	t	500	---	hr
Life-test end points:	---						
Peak emission	1231		---	is	25	---	a

1/ The tube shall operate for 2 minutes without arcing or signs of gas during a test interval not to exceed 5 minutes.

2/ The tube shall be operated as a clipper diode in a thyatron modulator.



Dimensions				
Ltr	Inches		Millimeters	
	Min	Max	Min	Max
Conformance inspection, part 2				
A	9.250	9.750	235.15	247.65
B	---	3.625	---	92.07
C	.594	.656	15.09	16.66
Conformance inspection, part 3 (periodic check)				
E	.559	.573	14.20	14.60
F	Base	A-4-18		
Reference dimensions				
D	1.00		25.40	

FIGURE 1. Outline drawing of tube type 7402.

Referenced documents. In addition to MIL-PRF-1, this document references the following:
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:
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

Review activities:
Air Force - 99

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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 <http://assist.daps.dla.mil/>.