

INCH POUND  
MIL-PRF-1/29E  
7 October 2002  
SUPERSEDING  
MIL-PRF-1/29D  
1 July 1997

PERFORMANCE SPECIFICATION SHEET

ELECTRON TUBE, RECEIVING  
TYPE 1Z2

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

The requirements for acquiring the product described herein shall consist of this document and MIL-PRF-1.

DESCRIPTION: Rectifier, half wave, high vacuum.

Outline	See figure 1
Base	
Envelope	

Cathode - - - Thoriated tungsten

Base connections:

Pin No.	1	2	3	4	5	6	7	Cap
Element	-f	+f	-f	-f	+f	-f	+f	a
	int sd		int sd	int sd		int sd		

ABSOLUTE-MAXIMUM RATINGS:

Parameter:	Ef	epx	ib	lo	CL	RI	F1
Unit:	V ac	kv	ma	mA dc	μF	Meg	kHz
Maximum:	1.25 ± 5%	15	8.5	1.5	- - -	- - -	200
Minimum:	- - -	- - -	- - -	- - -	- - -	(see note 1)	- - -
Test conditions:	1.25	15	- - -	1.5	0.01	4.2	- - -

GENERAL:

Qualification - Not required.

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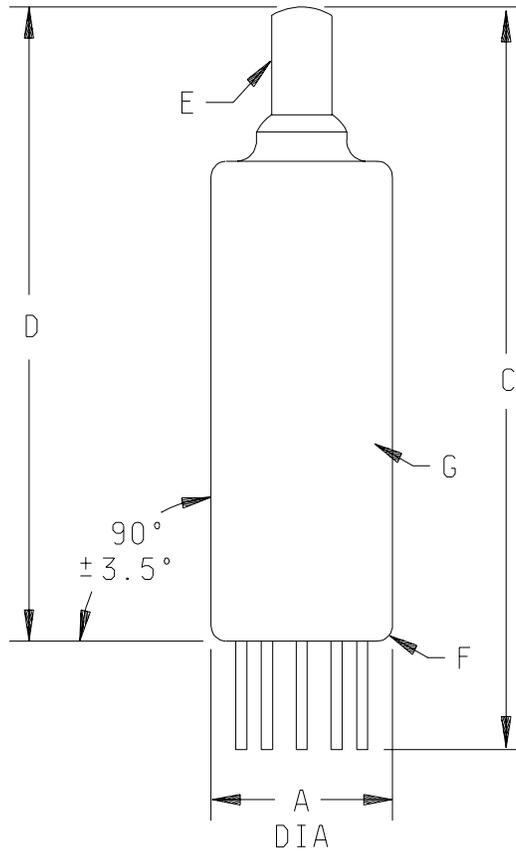
TABLE 1. Testing and Inspection.

Requirement or test	Mil-Std-1311		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
Conformance inspection, part 1						
Operation of rectifiers	1353	Ef = 1.2 V; Zp/ib = 8.5 mA (min) (see notes 2 and 3)	---	---	---	---
Emission current	1231	Ef = 1.35 V; Eb = 100 V dc	Is	9.5	---	mA dc
Conformance inspection, part 2						
Filament current	1301		If	245	285	mA
Low-frequency vibration	1031	No voltages	---	---	---	---
Secureness of base, cap, or insert	1101		---	---	---	---
	1105		---	---	---	---
Permanence of marking			---	---	---	---
Conformance inspection, part 3						
Intermittent life	1501	Group A; 250 hours with Ef = 1.25 V, or 500 hours with Ef=1.2 V; Zp/ib = mA	---	---	---	---
Intermittent life-test end point	---	Failure to rectify and emission	Is	8.5	---	mA dc

NOTES:

- 1/ The supply source impedance shall be at least 300,000 ohms.
- 2/ The tube shall be operated in a half-wave rectifier circuit at 50 to 60 Hz. Apply heater and anode voltage simultaneously to cold tube. After cathode has reached operating temperature, key anode current three times, no arcing shall occur.
- 3/ This test to be performed at the conclusion of the holding period.

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Dimensions				
Ltr	Inches		mm	
	Min	Max	Min	Max
Conformance inspection, part 1				
A	---	.75	---	19.05
C	---	2.70	---	68.58
D	2.34	2.47	59.44	62.74
Conformance inspection, part 3 (periodic check)				
E	Cap: C1-3			
F	Base: E7-1			
G	Envelope: T5½			

FIGURE 1. Outline drawing of electron tube type 1Z2.

Custodians:

Army - CR  
Navy - EC  
Air Force - 11  
DLA - CC

Preparing activity:  
DLA - CC

(Project 5960-3591)

Review activities:

Army - CR4  
Navy - AS, CG, OS  
Air Force - 19, 99