



METHOD	REQUIREMENT OR TEST	TYPE	CONDITIONS	AQL (PERCENT DEFECTIVE)	INSPECTION LEVEL OR CODE	SYMBOL	LIMITS		UNIT
							MIN	MAX	
	<u>Quality conformance inspection, part 1</u>								
1326	Conversion trans-conductance (1)	All	Test condition (1) (see note 2 or 3)	1.0	II	Sc	300	600	μmhos
1266	Total grid current	a, b, c, d	Test condition (1) (see note 2 or 3 and note 4)	1.0	II	Ic3	0	-2.0	μAdc
1266	Total grid current	e	Test condition (2); Rg3 = 0.1 Meg (see note 2 or 3 and note 4)	1.0	II	Ic3	0	-2.0	μAdc
1266	Grid emission	All	Preheat with Ehk = 100 Vdc for 5 minutes; Ec1 = Ec3 = -3.4 Vdc (see note 5)	---	---	Ic1	---	-5.0	μAdc
1237	Oscillator grid current (1)	All	Test condition (1) (see note 3)	1.0	II	---	---	---	---
1231	Emission	All	Eb = Ec1 = Ec2 = Ec3 = Ec4 = 30 Vdc (see note 4)	1.0	II	Is	70	---	μAdc
1256	Electrode current (anode)	All	Test condition (1) (see note 2 or 3)	1.0	II	Ib	2.5	4.5	μAdc
1256	Electrode current (screen)	All	Test condition (1) (see note 2 or 3)	1.0	II	Ic2, 4	6.5	11.5	μAdc
	<u>Quality conformance inspection, part 2</u>								
1031	Low-frequency vibration	All	Rp = 10,000 ohms; Ec1 = Ec3 = -3.5 Vdc	---	---	Ep	---	300	mVar
1301	Heater current	a, b		---	---	If	275	325	mA
1301	Heater current	c, d, e		---	---	If	138	162	mA
1336	Heater-cathode leakage	All		---	---	Ihk	---	20	μAdc
1326	Conversion trans-conductance (2)	e	Test condition (2); Ic1 = 120 μAdc (see note 2 or 3)	---	---	Sc	200	400	μmhos
1326	Conversion trans-conductance (3)	All	Test condition (1); Ec3 = -35 Vdc (see note 2 or 3)	---	---	Sc	0.5	25	μmhos
1306	Transconductance	All	Test condition (1); Eb = 100 Vdc; Ec3 = 0 (see note 6)	---	---	Sg1g2	3,500	5,900	μmhos
1237	Oscillator grid current (2)	e	Test condition (2); Rg1 = 50,000 ohms (see note 7)	---	---	Ic1	100	200	μAdc

METHOD	REQUIREMENT OR TEST	TYPE	CONDITIONS	AQL (PERCENT DEFECTIVE)	INSPECTION LEVEL OR CODE	SYMBOL	LIMITS		UNIT
							MIN	MAX	
	<u>Quality conformance inspection, part 2</u> -Continued								
1331	Direct-interelectrode capacitance	a, c, e b, d All  All	No shield Shield No. 308 Shield No. 308 for T9 bulbs Shield No. 308 for T9 bulbs	---	---	Cga Cga Cg3- all Ca-all	--- --- 7.6 7.0	0.25 0.5 11.4 12.0	pF pF pF pF
1041	Shock	b	450 G (see note 8)	15	S4	---	---	---	---
---	Post-shock test end points:								
1336	Heater-cathode leakage	b		---	---	Ihk	---	30	$\mu$ Adc
1306	Transconductance	b		---	---	Sg1g2	3,000	6,000	$\mu$ mhos
1105	Permanence of marking	All		---	---	---	---	---	---
	<u>Quality conformance inspection, part 3</u>								
1501	Intermittent life	All	Test condition (1), Group A: Ehk 100 V (see note 9)	---	---	---	---	---	---
---	Intermittent life-test end points (500 hours):								
1326	Conversion trans-conductance (1)	All		---	---	Sc	225	---	$\mu$ mhos
1237	Oscillator grid current (1)	All		---	---	Ic1	See note 10	---	---
Ⓢ 1031	Vibration fatigue (see note 11)	b		---	---	---	---	---	---
---	Vibration-fatigue test end points:								
1336	Heater-cathode leakage	b		---	---	Ihk	---	30	$\mu$ Adc
1306	Transconductance	b		---	---	Sg1g2	3,000	6,000	$\mu$ mhos
Ⓢ 1031	Variable-frequency vibration (see note 11)	b	Rp 2,000 ohms	---	---	Ep	---	500	mVac

## NOTES:

- See "Reduced pressure (altitude) rating", and altitude maximum peak voltage in the basic document.
- Insert 20,000 ohms and a suitable bypass capacitor in series with grid No. 1. Apply sufficient ac signal to produce 0.5 mAdc average grid current.
- In place of circuit of note 2 the tube may be operated in converter oscillator test set, with tank circuit impedance adjusted to 3,100 ohms, with Rg1 = 50,000 ohms. Ic1 shall be between 150 and 260  $\mu$ Adc; or with Rg1 = 20,000 ohms, Ic1 shall be between 380 and 640  $\mu$ Adc. Ec3 = 0.
- This test to be performed at the conclusion of the holding period.
- One tube from every other day's production shall be subjected to this test. Any failure shall cause this test to be performed at AQL of 6.5, inspection level of S3.
- The screen and anode together at socket.
- Tank circuit impedance adjusted to 9,000 ohms.
- Rated heater voltage shall be applied.

NOTES: -Continued

9.  $E_{c1} = -16 \text{ Vdc}$ ;  $E_{c3} = 0$ ; apply 16.5 Vac to grid 1.  $E_{c1}$  may be obtained by self rectification.
10. See note 3. With  $R_{g1} = 50,000 \text{ ohms}$ ;  $I_{c1} (\text{min}) = 135 \mu \text{ Adc}$  or with  $R_{g1} = 20,000 \text{ ohms}$ ;  $I_{c1} (\text{min}) = 330 \mu \text{ Adc}$ .
- ① 11. This test shall be performed during the initial production and once each succeeding 12-calendar months in which there is production. A regular double sampling plan shall be used, with the first sample of three tubes with an acceptance number of zero, and a second sample of three tubes with a combined acceptance number of one. In the event of failure, the test will be made as a part of quality conformance inspection, part 2, code level D, with an AQL of 6.5. The regular "12-calendar month" double sampling plan shall be reinstated after three consecutive samples have been accepted.

Custodians:

Army - EL  
Navy - EC  
Air Force - 85

Preparing activity:

Navy - EC

Agent:

DSA - ES

Review activities:

Army - MU  
Air Force - 99  
DSA - ES

(Project 5960-4002)

User activities:

Army - WC  
Navy - AS, OS, MC, CG  
Air Force - 11