ELECTRONICS

6136
PENTODE

Five-Star Tube

★★★★★

FOR RF AND IF AMPLIFIER APPLICATIONS

SHARP-CUTOFF CHARACTERISTIC
7-PIN MINIATURE
HIGH TRANSCONDUCTANCE
SHOCK, VIBRATION RATINGS
HEATER-CYCLING RATING
PROTOTYPE—6AU6

DESCRIPTION AND RATING

The 6136 is a miniature sharp-cutoff pentode designed primarily for use as a high gain radio-frequency or intermediate-frequency amplifier. Its low grid-plate capacitance and high transconductance make it especially suited for high-frequency wide-band applications. Analysis of the electrical characteristics of this tube with those of the 6AU6 will indicate that the 6136 is essentially similar.

The 6136 is a special-quality tube intended for use in critical industrial and military applications in which operational dependability is of primary importance. Features of the tube include a high degree of mechanical strength and a heater-cathode construction capable of withstanding many-thousand cycles of intermittent operation. When used in on-off control applications, the tube will maintain its emission capabilities after long periods of operation under cutoff conditions.

GENERAL

ELECTRICAL

Cathode - Coated Unipotential

Heater Characteristics and Ratings

Heater Voltage, AC or DC*	6.3±0.6	Volts
Heater Current‡	0.3	Amperes

Direct Interelectrode Capacitances

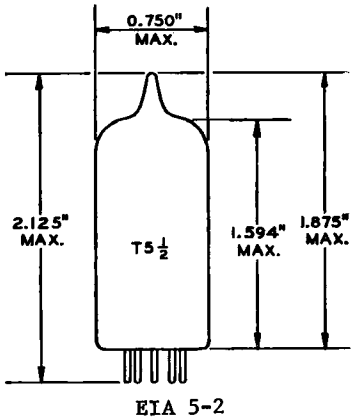
	With Shield§	Without Shield	
Grid-Number 1 to Plate: (g1 to p), maximum	0.0035	0.0035	pf
Input: g1 to (h + k + g2 + g3 + i.s.)	6.5	6.0	pf
Output: p to (h + k + g2 + g3 + i.s.)	5.5	5.0	pf

MECHANICAL

Operating Position - Any
Envelope - T-5 1/2, Glass
Base - E7-1, Miniature Button 7-Pin
Outline Drawing - EIA 5-2

Maximum Diameter	0.750	Inches
Maximum Over-all Lenghth	2.125	Inches
Maximum Seated Height	1.875	Inches

PHYSICAL DIMENSIONS

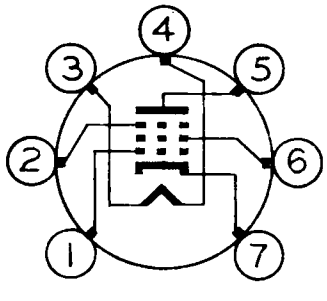


EIA 5-2

TERMINAL CONNECTIONS

Pin 1 - Grid Number 1
Pin 2 - Grid Number 3 (Suppressor) and Internal Shield
Pin 3 - Heater
Pin 4 - Heater
Pin 5 - Plate
Pin 6 - Grid Number 2 (Screen)
Pin 7 - Cathode

BASING DIAGRAM



EIA 7BK

GENERAL ELECTRIC

Supersedes pages 1 and 2 only ET-T1108A dated 12-59

MAXIMUM RATINGS

ABSOLUTE-MAXIMUM VALUES

Plate Voltage	330	Volts
Suppressor Voltage	0	Volts
Screen-Supply Voltage	330	Volts
Screen Voltage - See Screen Rating Chart		
Positive DC Grid-Number 1 Voltage	0	Volts
Negative DC Grid-Number 1 Voltage	50	Volts
DC Grid-Number 1 Current	1.0	Milliamperes
Plate Dissipation	3.3	Watts
Screen Dissipation	0.7	Watts
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode	100	Volts
Heater Negative with Respect to Cathode	100	Volts
Grid-Number 1 Circuit Resistance	0.5	Megohms
Bulb Temperature at Hottest Point	165	C

Absolute-Maximum ratings are limiting values of operating and environmental conditions applicable to any electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making no allowance for equipment variations, environmental variations, and the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration and of all other electron devices in the equipment.

The equipment manufacturer should design so that initially and throughout life no absolute-maximum value for the intended service is exceeded with any tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of the tube under consideration and of all other electron devices in the equipment.

CHARACTERISTICS AND TYPICAL OPERATION

CLASS A_1 AMPLIFIER

Plate Voltage	100	250	Volts
Suppressor, Connected to Cathode at Socket			
Screen Voltage	100	150	Volts
Cathode-Bias Resistor	150	68	Ohms
Plate Resistance, approximate	0.5	1.0	Megohms
Transconductance	3900	5200	Micromhos
Plate Current	5.0	10.6	Milliamperes
Screen Current	2.1	4.3	Milliamperes
Grid-Number 1 Voltage, approximate			
Ib = 10 Microamperes	-4.2	-6.5	Volts

NOTES

* The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.

‡ Heater current of a bogey tube at Ef = 6.3 volts.

§ With external shield (EIA 316) connected to cathode.

CLASS A RESISTANCE-COUPLED AMPLIFIER

LOW IMPEDANCE DRIVE (APPROXIMATELY 200 OHMS)

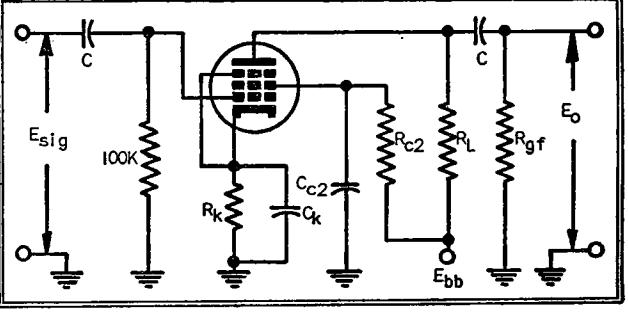
R_L	R_{gf}	Ebb = 90 Volts				Ebb = 180 Volts				Ebb = 300 Volts			
		R_k	R_{c2}	E_o	Gain	R_k	R_{c2}	E_o	Gain	R_k	R_{c2}	E_o	Gain
0.10	0.10	960	0.1	13	68	610	0.2	27	96	480	0.2	47	120
0.10	0.24	1000	0.2	16	93	630	0.2	35	130	480	0.2	60	160
0.24	0.24	2900	0.3	12	88	1700	0.4	25	120	820	0.6	44	200
0.24	0.51	3600	0.4	14	110	1800	0.5	31	170	960	0.7	53	240
0.51	0.51	5300	0.9	10	110	4000	0.9	23	160	2100	1.1	38	230
0.51	1.0	4600	1.1	12	125	3800	1.1	25	200	1800	1.3	44	300

HIGH IMPEDANCE DRIVE (APPROXIMATELY 100K OHMS)

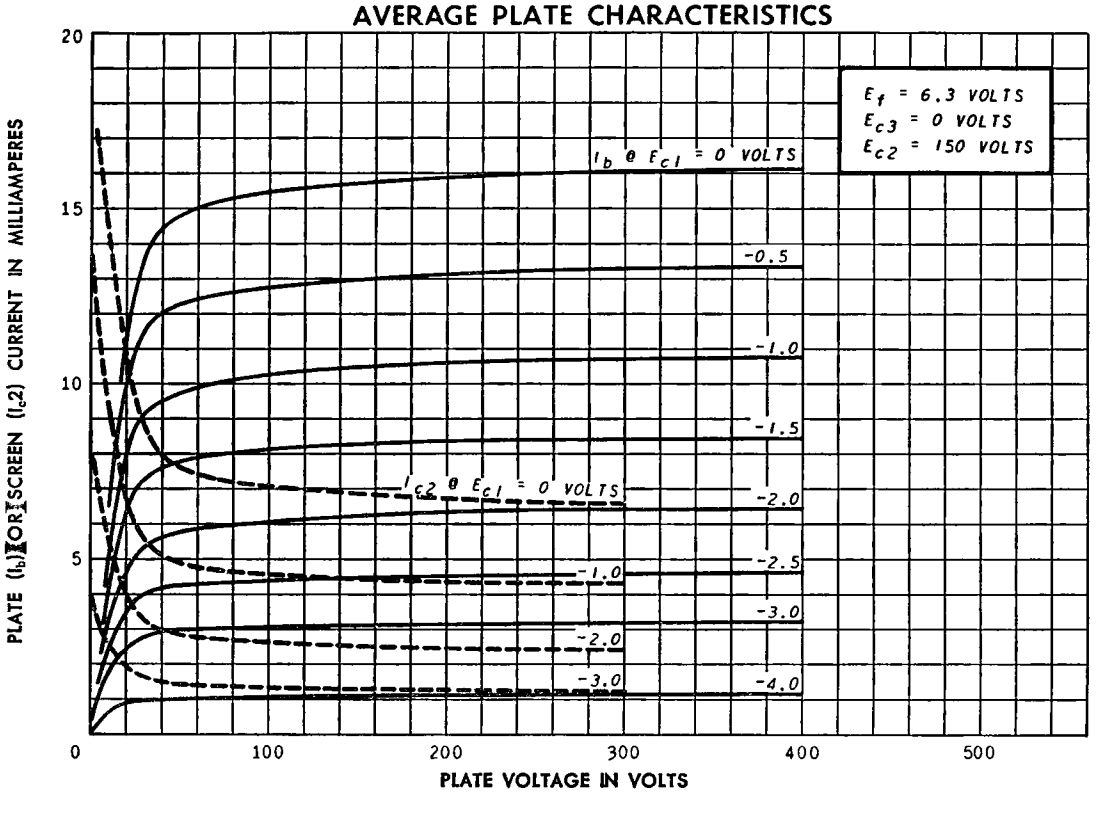
R_L	R_{gf}	Ebb = 90 Volts				Ebb = 180 Volts				Ebb = 300 Volts			
		R_k	R_{c2}	E_o	Gain	R_k	R_{c2}	E_o	Gain	R_k	R_{c2}	E_o	Gain
0.10	0.10	1000	0.2	13	70	560	0.2	26	100	380	0.2	47	130
0.10	0.24	1100	0.2	17	100	630	0.2	34	140	470	0.2	59	180
0.24	0.24	1900	0.6	15	100	1100	0.7	29	170	890	0.7	46	210
0.24	0.51	2200	0.7	17	140	1200	0.8	36	210	990	0.7	57	260
0.51	0.51	3000	1.6	17	120	1700	1.8	33	200	1200	1.8	54	290
0.51	1.0	3200	1.8	21	140	1800	2.0	41	240	1300	1.9	68	350

Notes:

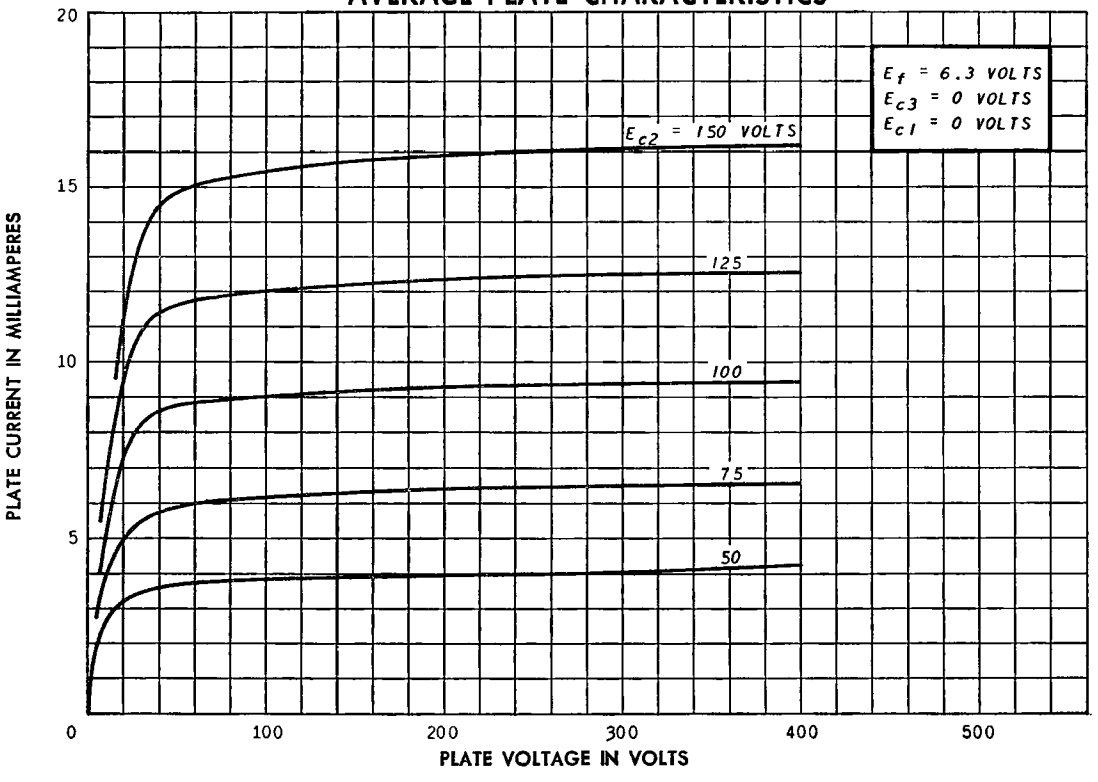
1. E_o is maximum RMS voltage output for approximately five percent total harmonic distortion.
2. Gain is measured for an output voltage of two volts RMS.
3. R_k is in ohms; R_{c2}, R_L, and R_{gf} are in megohms.
4. Coupling capacitors (C) should be selected to give desired frequency response. R_k and R_{c2} should be adequately by-passed.



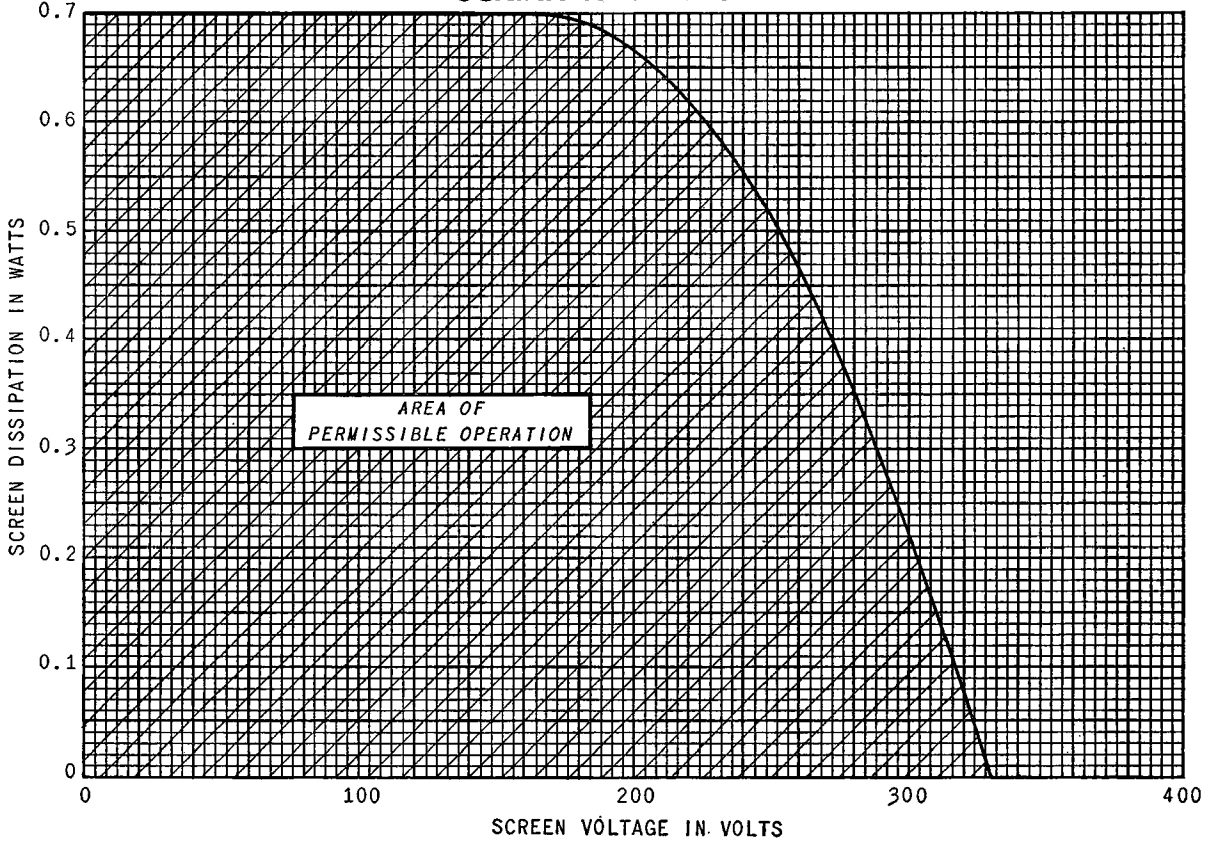
AVERAGE PLATE CHARACTERISTICS



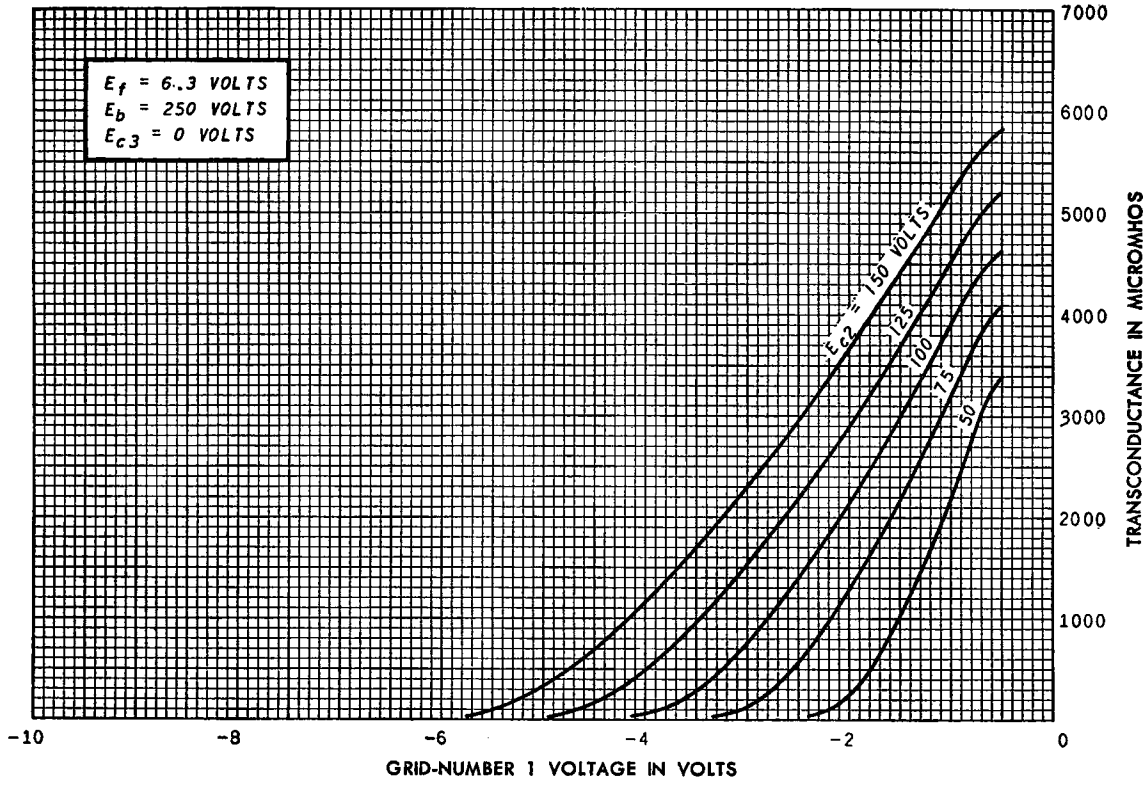
AVERAGE PLATE CHARACTERISTICS



SCREEN RATING CHART



AVERAGE TRANSFER CHARACTERISTICS



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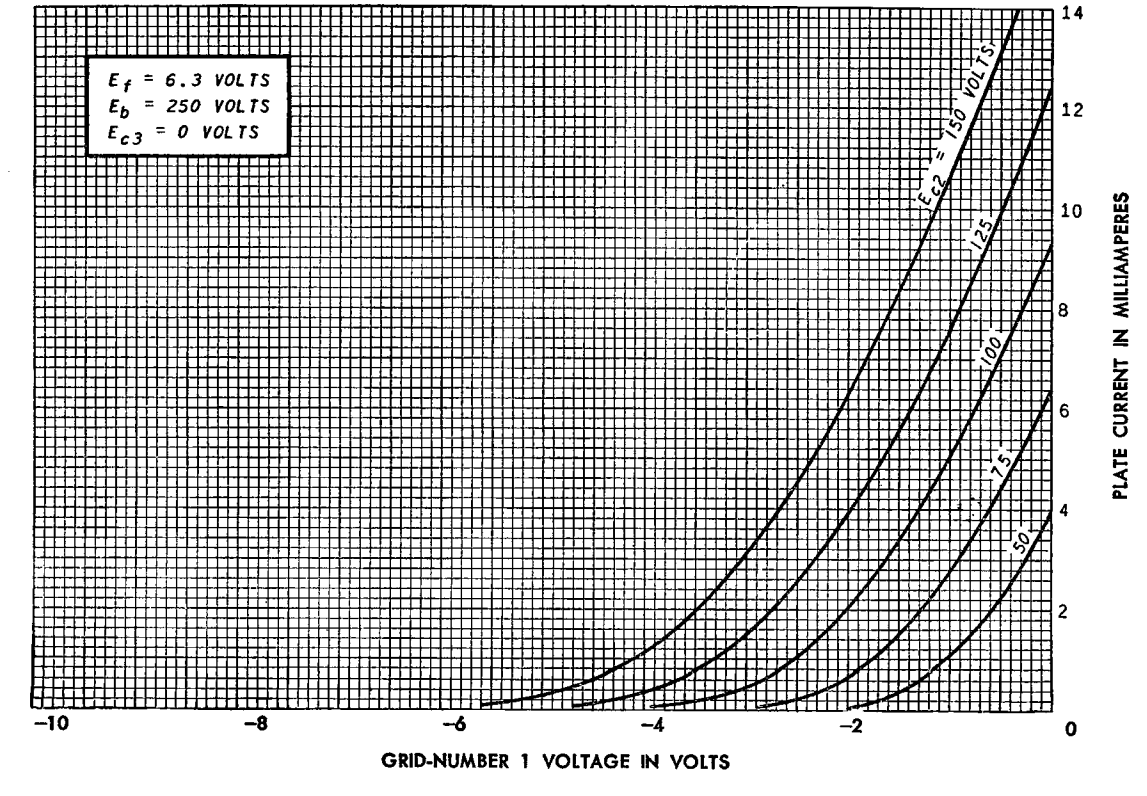
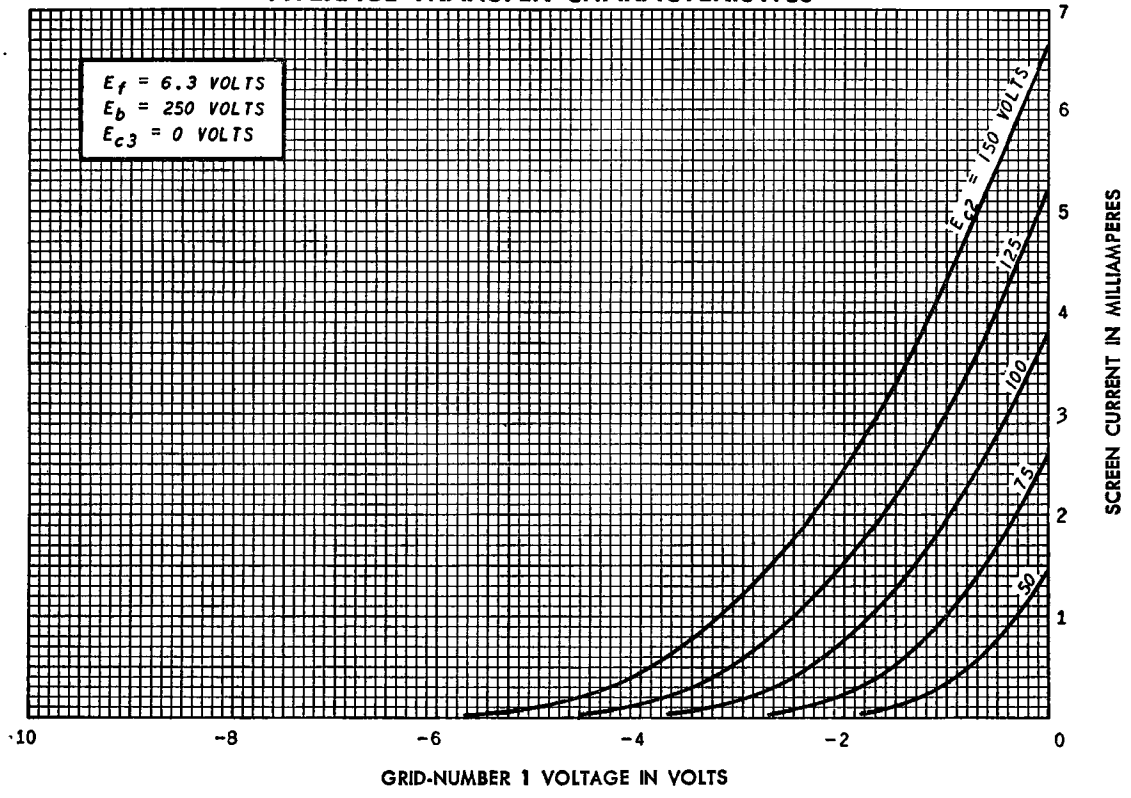


AVERAGE TRANSFER CHARACTERISTICS



PERFORMANCE ASSURANCE SPECIFICATION

General Test Conditions

Heater Voltage	6.3 V	Grid-Number 1 Voltage	0 Vdc
Plate Voltage	250 Vdc	Grid-Number 2 Voltage	150 Vdc
Cathode-Bias Resistor	68 ohms	Grid-Number 3 Voltage	Note 1

For the purposes of inspection, use applicable paragraphs of MIL-E-1.

MIL-E-1 REF.	TEST	MODIFICATIONS TO GENERAL TEST CONDITIONS	AQL %	INSP. LEVEL	LIMITS			UNITS
					Min.	Bogey	Max.	
	Measurements Acceptance Tests, Part 1, Note 2							
.....	Continuity and Short Circuits (Inoperatives)	Note 3	0.4	II	...	...	...	
4.10.8	Heater Current		0.4	II	275	300	325	mA
4.10.8	Heater Current	Variables Tests, Note 4	...	...	...	...	...	
4.10.15	Heater-Cathode Leakage, Ehk = ±100 Vdc		0.4	II	...	...	10	μAdc
4.10.6.1	Grid-Number 1 Current	Ec1 = −1.0 Vdc; Rg1 = 0.25 Meg.	0.4	II	0	...	−1.0	μAdc
4.10.4.1	Plate Current (1)		0.4	II	8.0	10.6	13.5	mAdc
4.10.4.1	Plate Current (1)	Variables Tests, Note 5	...	...	...	...	...	
4.10.4.1	Plate Current (2)	Ec1 = −9 Vdc; Rp = 0.1 Meg.	0.4	II	...	...	35	μAdc
4.10.4.3	Screen-Grid Current		0.4	II	2.6	4.3	6.0	mAdc
4.10.4.3	Screen-Grid Current	Variables Tests, Note 6	...	...	...	...	...	
4.10.9	Transconductance (1)	Ck = 1000 μf	0.4	II	4150	5200	6250	μmhos
4.10.9	Transconductance (1)	Ck = 1000 μf Variables Tests, Note 7	...	...	...	...	...	
4.9.1	Mechanical	Outline 6-2	...	...	...	...	...	

PERFORMANCE ASSURANCE SPECIFICATION
(Continued)

MIL-E-1 REF.	TEST	MODIFICATIONS TO GENERAL TEST CONDITIONS	AQL %	INSP. LEVEL	LIMITS Min.	LIMITS Bogey	LIMITS Max.	UNITS
	Measurements Acceptance Tests, Part 2							
4.8	Insulation of Electrodes	Note 8						
		g1-all	2.5	L6	100	...	...	Meg
		p-all			100	...	...	Meg
4.10.4.1	Plate Current (3)	Ec1 = −6 Vdc; Rp = 0.5 Meg	2.5	I	5.0	...	...	μAdc
4.10.9	Transconductance (2)	Ef = 5.7 V; Ck = 1000 μf; Note 9	2.5	I	...	...	15	%
4.10.6.2	Grid Emission	Ef = 7.5 V; Ec1 = − 10 Vdc; Rg1 = 0.25 Meg; Note 10	2.5	I	0	...	−2.0	μAdc
4.10.3.1	Radio-Frequency Noise (Other than shot-effect noise)	Eca1 = 15 mVac; Ec1 = −1.0 Vdc; Rk = 0; Note 11	2.5	I	...	...	...	
4.10.3.4	Noise and Microphonics	Ef = 6.3 Vdc; Ebb = 300 Vdc; Ecc2 = 300 Vdc; Eca1 = 500 mVac; Rk = 1000 ohms; Rp = 0.22 Meg; Rg2 = 0.5 Meg; Ck = 1000 μf; Cg2 = 2 μf, Note 12	2.5	I	...	...	...	
4.10.14	Capacitance..... Grid 1 to Plate	No Shield		Code E	...	...	0.0035	μμf
	Input	No Shield	6.5		4.8	6.0	7.2	μμf
	Output	No Shield			3.9	4.9	5.9	μμf
4.9.12.1	Low-Pressure Voltage Breakdown	Pressure = 55 ± 5 mm Hg; Voltage = 500 Vac	6.5	Note 15	...	...	...	
4.9.19.1	Low-Frequency Vibration (2)	Rp = 2000 ohms; Ck = 1000 μf; G = 10; F = 40 cps	6.5	Code I	...	...	300	mVac

PERFORMANCE ASSURANCE SPECIFICATION
(Continued)

MIL-E-1 REF.	TEST	MODIFICATIONS TO GENERAL TEST CONDITIONS	AQL %	INSP. LEVEL	LIMITS Min.	LIMITS Bogey	LIMITS Max.	UNITS
	Degradation-Rate Acceptance Tests, Note 13							
4.9.20.5	Shock	Hammer Angle = 30°; Ehk = +100 Vdc; Note 14	...	...	...	...	...	
4.9.20.6	Fatigue	G = 2.5; Fixed Frequency; F = 25 min., 60 max.	6.5	Note 15	...	...	...	
.....	Post-Shock and Fatigue-Test End Points	Vibration (2)	...	...	...	...	450	mVac
		Heater-Cathode Leakage						
		Ehk = +100 Vdc	...	...	...	...	30	μAdc
		Ehk = −100 Vdc	...	...	...	...	30	μAdc
		Transconductance (1)	...	...	3600	...	...	μmhos
		Grid-Number 1 Current	...	...	...	...	−2.0	μAdc
4.9.6.1	Miniature-Tube Base-Strain		...	...	...	...	...	
4.9.6.3	Glass Strain		2.5	I	...	...	...	

MIL-E-1 REF.	TEST	MODIFICATIONS TO GENERAL TEST CONDITIONS	AQL %	ALLOWABLE DEFECTS PER CHARACTERISTIC 1st Sample	ALLOWABLE DEFECTS PER CHARACTERISTIC Combined Sample	LIMITS Min.	LIMITS Max.	UNITS
	Acceptance Life Tests, Note 13							
4.11.7	Heater Cycling Life Test	Ef = 7.5 V; Ehk = +135 Vdc; Ec1 = Ec2 = Eb = 0	1.0	....	....	...	...	
4.11.4	Heater Cycling Life Test End Points	Heater-Cathode Leakage						
		Ehk = +100 Vdc	...	....	....	...	20	μAdc
		Ehk = −100 Vdc	...	....	....	...	20	μAdc
4.11.3.1	Stability Life Test	Eb = 300 Vdc;	1.0	Code	....	...	...	
		Ehk = +135 Vdc; Rk = 80 ohms;	...	I	....	...	...	
		TA = Room; Note 16						
.....	Stability Life Test End Points (2 and 20 hours)	Change in Transconductance (1) of individual tubes	...	....	....	...	10	%
.....	Survival-Rate Life Test	Stability life test conditions or equivalent; Note 17	...	II	....	...	.....	

PERFORMANCE ASSURANCE SPECIFICATION
(Continued)

MIL-E-1 REF.	TEST	MODIFICATIONS TO GENERAL TEST CONDITIONS	AQL %	ALLOWABLE DEFECTS PER CHARACTERISTIC		LIMITS		UNITS
				1st Sample	Combined Sample	Min.	Max.	
	Acceptance Life Tests, Note 13 (Continued)							
4.11.4	Life Test End Points (100 hours)	Continuity and Shorts	0.65	....	....	...	...	
		(Inoperatives) Transconductance (1)	1.0	....	....	3600	...	μmhos
4.11.5	Intermittent Life Test Operation	Stability life test conditions; T (envelope) = 165 C min.	...	....	....	...	...	
4.11.4	Life Test...Note 18 End Points (500 hours)	Inoperatives Note 19	...	1	3	...	...	
		Grid-Number 1 Current	...	1	3	0	−1.0	μAdc
		Heater Current	...	1	3	275	330	mA
		Change in Transconductance (1) of individual tubes	...	1	3	...	20	%
		Transconductance (2)	...	1	3	...	15	%
		Heater-Cathode Leakage						
		Ehk = +100 Vdc	...	1	3	...	10	μAdc
		Ehk = −100 Vdc				...	10	μAdc
		Insulation of Electrodes Note 8						
		g1-all	...	1	3	60	...	Meg
		p-all	...			60	...	Meg
		Transconductance (1) (average change)	...	....	....	...	15	%
		Total Defectives	...	3	6	...	...	
	Life Test...Note 18 End Points (1000 hours)	Inoperatives Note 19	...	1	3	...	...	
		Grid-Number 1 Current	...	1	3	0	−1.0	μAdc
		Heater Current	...	1	3	275	333	mA
		Change in Transconductance (1) of individual tubes	...	1	3	...	25	%
		Transconductance (2)	...	1	3	...	20	%
		Heater-Cathode Leakage						
		Ehk = +100 Vdc	...	1	3	...	20	μAdc
		Ehk = −100 Vdc	...			...	20	μAdc
		Insulation of Electrodes Note 8						
		g1-all	...	1	3	50	...	Meg
		p-all	...			50	...	Meg
		Total Defectives	...	4	8	...	...	
4.11.8	Cathode Interface Life Test...Note 20	Ef = 6.9 V; other electrodes disconnected	...	....	.....	500	...	hr
.....	Life Test...Note 21 End Points	Ef = 5.7 ± 0.05 V; Eb = Ec2 = Ec3 = 90 Vdc; Ec1/Ib = 2.0 mAdc; Rk = 0	...	1	3	...	50	ohms

Note 1: Tie Grid-Number 3 to negative terminal of cathode resistor.

Note 2: The AQL for the combined defectives for attributes in Measurements Acceptance Tests, Part 1, excluding Inoperatives and mechanical, shall be 1.0 percent. A tube having one or more defects shall be counted as one defective.

Note 3: Tubes shall be tested for continuity of all possible circuits including shell, base, base sleeve, shield, and duplicate pin connections to the same electrode; for short-circuits between the tube elements or between the elements and the no-connection base pins; and for air leaks.

During both continuity and short-circuit testing, the tube under test shall be tapped at least three times in each of two planes 90 degrees and 120 degrees apart with a tapper, which shall be adjusted to give an impulse of approximately one-half sine wave of 300 ± 50 microseconds duration, as measured 10 percent from the base, and having a minimum average amplitude equivalent to 80 G's peak acceleration for T-5½ and larger tubes, and 40 G's peak acceleration for tubes smaller than the T-5½ bulb size.

During tapping, the tube shall be supported only by the socket and light finger or soft-cushioned mechanical pressure on the dome of the bulb. The finger or mechanical pressure on the dome of the bulb shall be used only when necessary to prevent the tube from coming out of the socket and shall be so applied that it offers negligible restraint to lateral motion at the top of the bulb.

The tap blows shall be delivered to the tube approximately two-thirds up on the seated height.

The tapper impulse shall be measured with a Gulton Mfg. Co. Type A-305 accelerometer mounted in a standard production type (replaceable cap and clips) 7-pin socket and having no other support. The tap blows shall be delivered to the accelerometer at the approximate midpoint of its seated height and in a direction parallel to the plane of maximum sensitivity of the accelerometer. The output of the accelerometer shall be coupled through a cathode follower and low-pass filter-amplifier combination to a suitably calibrated oscilloscope. The low-pass filter shall have a minimum high-frequency cutoff at 5000 cycles per second. The Gulton KA-1 test set on 5 Kc filter position possesses appropriate characteristics.

The tube under test shall be connected to the short-circuit test equipment in such a manner that a specified minimum sensitivity is maintained between all elements in a single section of a tube, but like elements in the sections of a multi-section tube may be paralleled, provided the mechanical assembly of the tube structure is such that the possibility of short-circuits between sections is remote. Except for heater to cathode, a short-circuit shall be defined as an equivalent resistance between adjacent elements which persists for a period of time in excess of that determined by a limiting curve of resistance-versus-time duration passing through the following points: 600,000 ohms, constant value (permanent short-circuits); 500,000 ohms, 500 microseconds; 100,000 ohms, 100 microseconds; and 1000 ohms, 60 microseconds. For heater to cathode, the minimum sensitivity shall be 10 percent of the above resistance value.

The maximum voltage between adjacent elements during short test shall be 70 Vdc, and the minimum shall be 20 Vdc.

Tubes which give an indication of one or more of the following shall be rejected as inoperable.

(a) Either a permanent or tap short-circuit at any time during the tapping procedure.
(b) Any open circuit.
(c) Air leaks (see 4.7.6).

Note 4: Variables test conducted in accordance with Par. 4.1.1.7, MIL-E-1, with limits as follows:

LAL = 289 mA
UAL = 311 mA
ALD = 22 mA

Note 5: Variables test conducted in accordance with Par. 4.1.1.7, MIL-E-1, with limits as follows:

LAL = 9.1 mAdc
UAL = 12.1 mAdc
ALD = 3.3 mAdc

Note 6: Variables test conducted in accordance with Par. 4.1.1.7, MIL-E-1, with limits as follows:

LAL = 3.5 mAdc
UAL = 5.1 mAdc
ALD = 1.6 mAdc

Note 7: Variables test conducted in accordance with Par. 4.1.1.7, MIL-E-1, with limits as follows:

LAL = 4700 μmhos
UAL = 5700 μmhos
ALD = 1100 μmhos

Note 8: Measure at a potential of 100 volts grid-to-all and 300 volts plate-to-all.

Note 9: Transconductance (2) is the percentage change in Transconductance (1) of an individual tube resulting from the change in Ef.

Note 10: Prior to the Grid-Emission Test, tube shall be preheated five minutes at conditions indicated below. Test immediately after preheating. Grid-Emission shall be the last test performed on the sample selected for the Grid-Emission Test.

Ef	Eb	Ec1	Ec2	Ec3	Rk	Rg1
V	Vdc	Vdc	Vdc	Vdc	ohms	Meg
7.5	300	0	150	0	80	0.5

Note 11: In addition to the rejection criteria of Par. 4.10.3.1, MIL-E-1, the output shall be read on a VU meter using a rejection limit of 5VU. Five VU is the meter deflection obtained with a steady state output of 3 mW from the amplifier.

Note 12: The rejection level shall be set at the VU meter reading obtained during calibration.

Note 13: Destructive Tests:

Tubes subjected to the following destructive tests are not to be accepted under this specification.

4.9.20.5 Shock Test
4.9.20.6 Fatigue Test
4.11.5 Intermittent Life Test Operation
4.11.7 Heater-Cycling Life Test
4.11.8 Cathode Interface Life Test

Note 14: A grid resistor of 0.1 megohm shall be added; however, this resistor will not be used when a thyratron-type short-circuit indicator is employed.

Note 15: This test shall be conducted on the initial lot and thereafter on a lot approximately every 30 days. When one lot has passed, the 30-day rule shall apply. In the event of lot failure, the lot shall be rejected and the succeeding lots shall be subject to this test until a lot passes. MIL-STD-105, sample size code letter F shall apply.

Note 16: Stability life test differs from Par. 4.11.3.1 of MIL-E-1 in the following manner:

1. Regular Stability Life Test
   The regular stability life test sample shall be operated at specified stability life test conditions or equivalent for 20 ± 4 hours with an intermediate down-period reading point at 2 hours (±30 minutes). Intermittent or continuous operation may be used. The regular stability life test shall be in effect initially and shall continue in effect until eligibility criteria for the reduced hours stability life test have been met.

2. Reduced Hours Stability Life Test
   a. Eligibility for reduced hours stability life test shall be as follows: no lot failure due to the regular stability life test has occurred in the preceding five consecutive lots.
   b. Reduced hours stability life test shall be conducted for 2 ± ½ hours. Acceptance shall be based on the stability life-test end-point limit. One lot failing the reduced hours stability life test shall result in loss of eligibility for the reduced hours stability life test.
   c. The stability life test sample from the first-lot accepted each month shall continue on stability life test to the 20 ± 4 hours duration. Failure of this sample to meet the regular stability life test end-point limit shall result in loss of eligibility for the reduced hours stability life test.

Note 17: Survival rate life test sampling and testing procedures are in accordance with paragraphs 20.2.5.2 through 20.2.5.2.4, Appendix C, MIL-E-1, with the following exceptions:

1. Under Par. 20.2.5.2.3, the criterion for specification of a defective tube shall not be Par. 4.7.5, MIL-E-1, but Note 3, above.
2. Paragraph 20.2.5.2.4 (b) is replaced by the following: tubes shall be subjected at 100 hours to the continuity and short test under the same conditions as for the initial test. When any tap-short indication is obtained, the test shall be repeated. When any short indication is again obtained, the tube shall be rejected as inoperable.

Note 18: Order for evaluation of life-test defects: see 4.11.3.1.2, MIL-E-1.

Note 19: An inoperative as referenced in life test is defined as a tube having one or more of the following defects: discontinuity (see Note 3 except tube shall not be tapped), permanent short (see Note 3 except tube shall not be tapped), and air leaks. (See 4.7.6, MIL-E-1).

Note 20: The interface life-test sample shall consist of 20 tubes, and not more than one failure shall be permitted. In the event of rejection of the first sample due to failure of more than one tube, a second sample of 40 tubes shall be selected from the lot. Acceptance shall be based on the combined first and second samples. The total tube failures from the combined first and second samples shall not exceed three. A life test defect is defined as a failure to meet the life test end-point limits as specified on the tube specification sheet. The interface life-test sample shall be read at 500, plus 48, minus 24 hours.

Note 21: No other test shall be made from the start of the interface life test until after the measurement of the end-point characteristic following completion of the indicated minimum number of life-test hours.

For the information and guidance of the tube user, this specification presents inspection criteria used at the plant of manufacture. It is subject to change without notice. Military equipment manufacturers who wish to determine the availability of tubes tested in accordance with MIL-E-1 specifications applicable to this or similar types should consult their nearest General Electric tube sales office.

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