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BEAM POWER TUBE

9-PIN MINIATURE TYPE

*For use in mobile communications equipment
operating from 6-cell storage-battery systems*

GENERAL DATA**Electrical:**

Heater, for Unipotential Cathode:

Voltage range. 12 to 15 ac or dc volts

Current (Approx.) at

13.5 volts 0.21 amp

Direct Interelectrode Capacitances:⁰Grid No.1 to plate 0.7 max. $\mu\mu\text{f}$

Grid No.1 to all other electrodes

except plate 8 $\mu\mu\text{f}$

Plate to all other electrodes

except grid No.1 8.5 $\mu\mu\text{f}$ **Mechanical:**

Operating Position Any

Maximum Overall Length 2-5/8"

Maximum Seated Length 2-3/8"

Length, Base Seat to Bulb Top (Excluding tip). . . 2" $\pm$ 3/32"

Diameter 0.750" to 0.875"

Dimensional Outline. See General Section

Bulb T6-1/2

Base Small-Button Noval 9-Pin (JETEC No. E9-1)

Basing Designation for BOTTOM VIEW 9EU

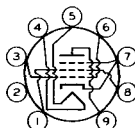
Pin 1-Grid No.2

Pin 2-No Con-
nection

Pin 3-Grid No.1

Pin 4-Heater

Pin 5-Heater



Pin 6-Grid No 1

Pin 7-Cathode,
Grid No.3

Pin 8-Grid No.2

Pin 9-Plate

AMPLIFIER — Class A₁**Maximum Ratings, Absolute Values:**

PLATE VOLTAGE 345 max. volts

GRID-No.2 (SCREEN-GRID) VOLTAGE 310 max. volts

GRID-No.2 INPUT 2 max. watts

PLATE DISSIPATION 9 max. watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode 120 max. volts

Heater positive with respect to cathode 120 max. volts

Typical Operation and Characteristics:

Heater Voltage. 13.5 volts

Plate Voltage 200 volts

Grid-No.2 Voltage 200 volts

Grid-No.1 (Control-Grid) Voltage. -10 volts

⁰ Without external shield.



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Peak AF Grid-No.1 Voltage	10	volts
Zero-Signal Plate Current	35.5	ma
Max.-Signal Plate Current	38	ma
Zero-Signal Grid-No.2 Current	9	ma
Max.-Signal Grid-No.2 Current	7.5	ma
Plate Resistance (Approx.)	60000	ohms
Transconductance	4200	μ mhos
Load Resistance	5000	ohms
Total Harmonic Distortion	7	%
Max.-Signal Power Output	3	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation	0.1 max.	megohm
For cathode-bias operation	0.5 max.	megohm

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	Note	Min.	Max.	
Heater Current	1	0.19	0.23	amp
Transconductance	1,2	3100	5800	μ mhos
Plate Current	1,2	26	45	ma
Grid-No.2 Current	1,2	—	6.5	ma
Reverse Grid-No.1 Current	1,3	—	—2	μ a
Power Output	1,4	2.4	—	watts

Heater-Cathode Leakage Current:

Heater negative with respect to cathode	1,5	—	50	μ a
Heater positive with respect to cathode	1,5	—	50	μ a

Leakage Resistance:

Between grid No.1 and all other electrodes tied together	1,6	50	—	megohms
Between plate and all other electrodes tied together	1,7	50	—	megohms

Note 1: With ac or dc heater volts = 13.5.

Note 2: With dc plate volts = 200, grid-No.2 volts = 200, grid-No.1 volts = -10, and grid No.3 connected to cathode.

Note 3: With grid-No.1 resistor (megohms) = 0.1.

Note 4: With load resistor (ohms) = 5000, and rms signal volts = 7.1.

Note 5: With 100 volts dc between heater and cathode.

Note 6: With grid No.1 100 volts negative with respect to all other electrodes tied together.

Note 7: With plate 300 volts negative with respect to all other electrodes tied together.

SPECIAL RATINGS & PERFORMANCE DATA

Heater-Cycling Life Performance:

This test is performed on a sample lot of tubes from each production run. A minimum of 2000 cycles of intermittent



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operation is applied under the following conditions: heater volts = 17 cycled one minute on and four minutes off, heater 135 volts negative with respect to cathode, and all other elements connected to ground. At the end of this test, tubes are checked for heater-cathode shorts and open circuits.

Low-Frequency Vibration Performance:

This test is performed on a sample lot of tubes from each production run under the following conditions: heater volts = 13.5, plate volts = 200, grid-No.2 volts = 200, grid-No.1 volts = -10, plate load resistor (ohms) = 2000, and vibrational acceleration of 2.5 g at 25 cps. In this test, the rms output voltage must not exceed 500 millivolts.

500-Hour Intermittent Life Performance:

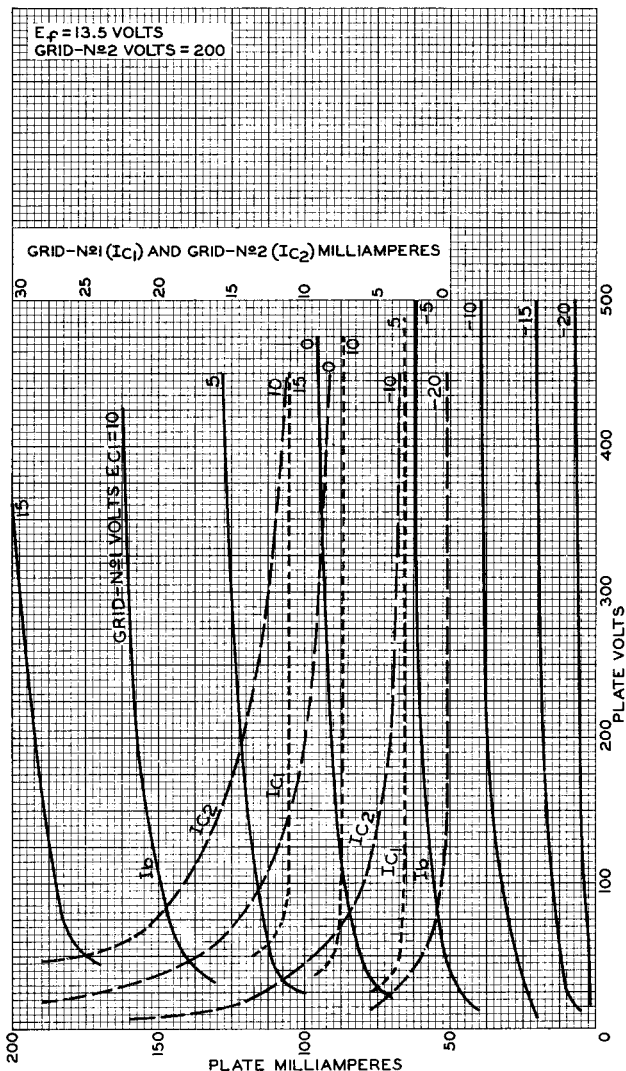
This test is performed on a sample lot of tubes from each production run to insure high quality of the individual tube and to guard against epidemic failures. Life testing is conducted under the following conditions: heater volts = 15, and maximum-rated plate dissipation and grid-No.2 input.

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AVERAGE CHARACTERISTICS



ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

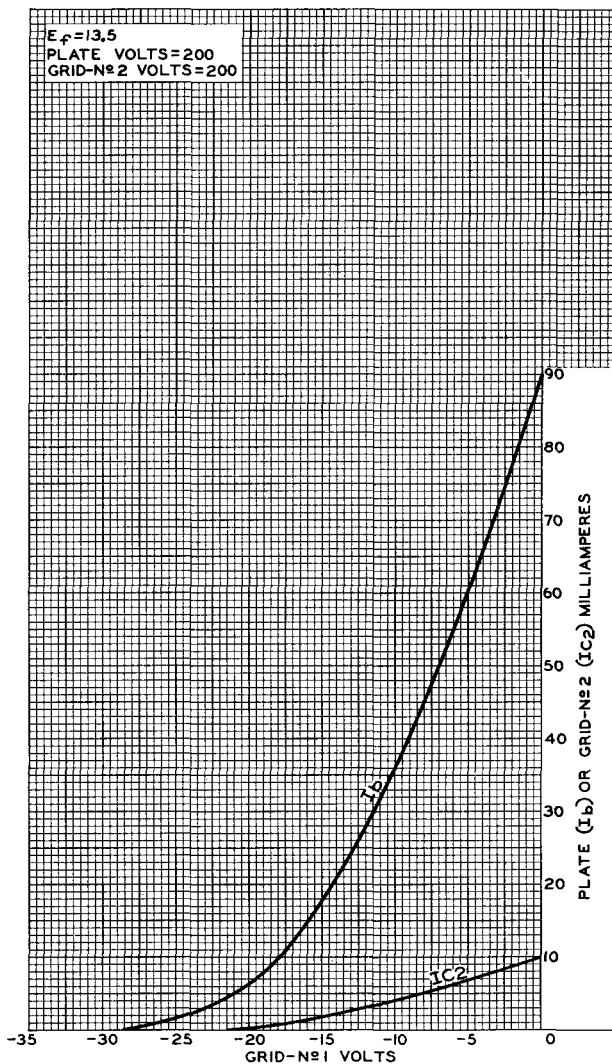
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AVERAGE CHARACTERISTICS

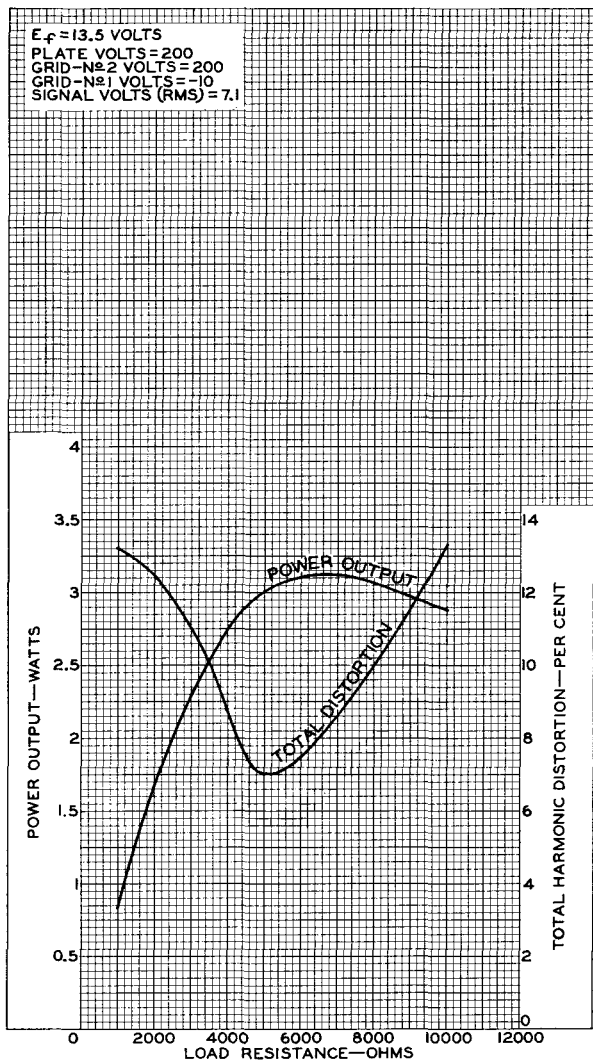


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OPERATION CHARACTERISTICS





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AVERAGE CHARACTERISTICS TRIODE CONNECTION

