

Beam Power Tube

9-PIN MINIATURE TYPE
For High-Fidelity Audio-
Amplifier Applications

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:		
Voltage (AC or DC)	6.3 ± 10%	volts ←
Current at 6.3 volts.	0.45	amp
Direct Interelectrode Capacitances: ⁰		
Grid No.1 to plate.	0.4 max.	μμf ←
Grid No.1 to cathode & grid No.3, grid No.2, and heater	9	μμf
Plate to cathode & grid No.3, grid No.2, and heater	6	μμf

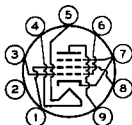
Characteristics, Class A₁ Amplifier:

Plate Voltage	250	volts
Grid-No.2 Voltage	250	volts
Grid-No.1 Voltage	-15	volts
Plate Resistance (Approx.)	73000	ohms
Transconductance	4800	μmhos
Plate Current	46	ma
Grid-No.2 Current	3.5	ma
Grid-No.1 Voltage (Approx.) for plate μa = 100.	-40	volts

Mechanical:

Operating Position.	Any
Maximum Overall Length.	3-1/16"
Maximum Seated Length	2-13/16"
Length, Base Seat to Bulb Top (Excluding tip)	2-7/16" ± 3/32"
Maximum Diameter.	0.750" to 0.875"
Dimensional Outline	See <i>General Section</i>
Bulb.	-T6-1/2
Base.	Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW.	9EU

Pin 1-Grid No.2
Pin 2-No Connection
Pin 3-Grid No.1
Pin 4-Heater
Pin 5-Heater



Pin 6-Grid No.1
Pin 7-Grid No.3,
Cathode
Pin 8-Grid No.2
Pin 9-Plate

PUSH-PULL AF POWER AMPLIFIER — Class AB₁

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE	440 max.	volts ←
GRID-No.2 (SCREEN-GRID) VOLTAGE	330 max.	volts

← Indicates a change.

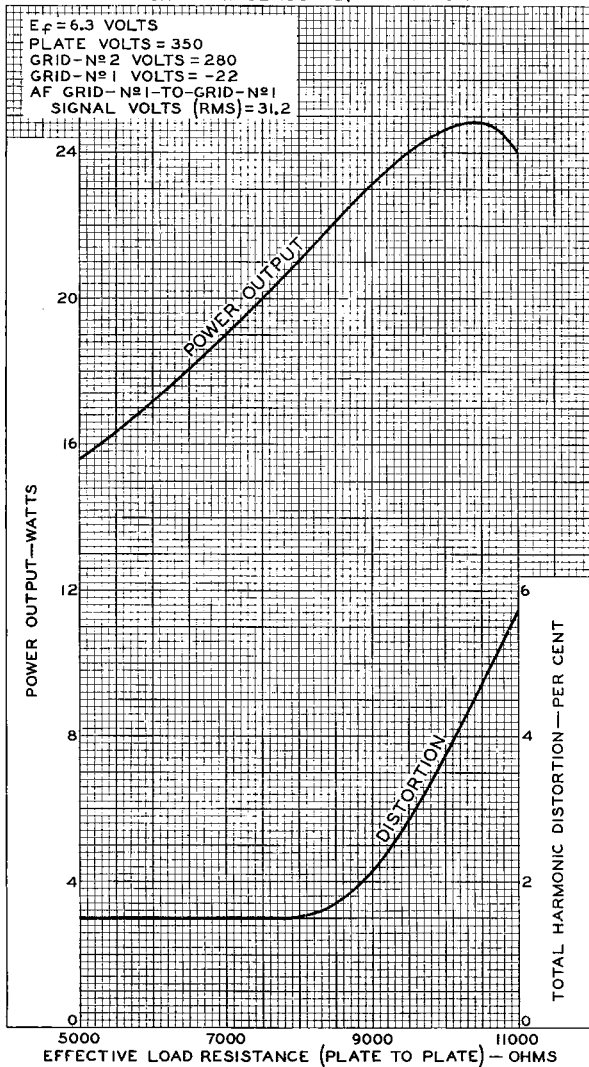


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OPERATION CHARACTERISTICS PUSH-PULL CLASS AB₁ OPERATION



ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-9381

GRID-No.2 INPUT.	2	max.	watts
PLATE DISSIPATION.	12	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.	200	max.	volts
Heater positive with respect to cathode.	200 [▲]	max.	volts
BULB TEMPERATURE (At hottest point			
on bulb surface)	250	max.	°C

Typical Operation with Fixed Bias:*Values are for 2 tubes*

Plate Voltage.	250	350	400	volts
Grid-No.2 Voltage.	250	280	290	volts
Grid-No.1 (Control-Grid) Voltage [●]	-15	-22	-25	volts
Peak AF Grid-No.1-to-Grid-No.1				
Voltage.	30	44	50	volts
Zero-Signal Plate Current.	92	58	50	ma
Max.-Signal Plate Current.	105	106	107	ma
Zero-Signal Grid-No.2 Current.	7	3.5	2.5	ma
Max.-Signal Grid-No.2 Current.	16	14	13.7	ma
Effective Load Resistance (Plate				
to plate).	8000	7500	8000	ohms
Total Harmonic Distortion.	2	1.5	2	%
Max.-Signal Power Output	12.5	20	24	watts

Typical Operation with Cathode Bias:*Values are for 2 tubes*

Plate Supply Voltage	300	310	volts
Grid-No.2 Supply Voltage	300	310	volts
Cathode Resistor	230	270	ohms
Peak AF Grid-No.1-to-Grid-No.1 Voltage	48	55	volts
Zero-Signal Plate Current.	80	77	ma
Max.-Signal Plate Current.	96	92	ma
Zero-Signal Grid-No.2 Current.	6	5	ma
Max.-Signal Grid-No.2 Current.	14	14	ma
Effective Load Resistance (Plate			
to plate).	5500	6000	ohms
Total Harmonic Distortion.	2	4	%
Max.-Signal Power Output	15	17	watts

Maximum Circuit Values:Grid-No.1-Circuit Resistance:[●]

For fixed-bias operation	0.5	max.	megohm
For cathode-bias operation	1	max.	megohm

PUSH-PULL AF POWER AMPLIFIER — Class AB₁*Grid No.2 of each tube connected to tap on plate winding of output transformer***→ Maximum Ratings, Design-Maximum Values:**

PLATE AND GRID-No.2 (SCREEN-GRID)			
SUPPLY VOLTAGE	410	max.	volts

→ indicates a change.





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BEAM POWER TUBE

GRID-NO.2 INPUT.	1.75	max.	watts
PLATE DISSIPATION.	12	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200 [▲]	max.	volts
BULB TEMPERATURE (At hottest point on bulb surface)	250	max.	°C

Typical Operation:*Values are for 2 tubes*

	<i>Fixed Bias</i>	<i>Cathode Bias</i>	
Plate-Supply Voltage	375	370	volts
Grid-No.2 Supply Voltage	*	#	volts
Grid-No.1 (Control-Grid) Voltage	-33.5	-	volts
Cathode Resistor	-	355	ohms
Peak AF Grid-No.1-to-Grid-No.1 Voltage.	67	62	volts
Zero-Signal Cathode Current.	62	74	ma
Max.-Signal Cathode Current.	95	84	ma
Effective Load Resistance (Plate to plate).	12500	13000	ohms
Total Harmonic Distortion.	1.5	1.2	%
Max.-Signal Power Output	18.5	15	watts

Maximum Circuit Values:**Grid-No.1-Circuit Resistance:•**

For fixed-bias operation	0.5 max.	megohm
For cathode-bias operation	1 max.	megohm

○ without external shield.

▲ The dc component must not exceed 100 volts.

● The type of input coupling network used should not introduce too much resistance in the grid-No.1 circuit. Transformer- or impedance-coupling devices are recommended.

* Obtained from taps on the primary winding of the output transformer. The taps are located on each side of the center tap (B+) so as to apply 50 per cent of the plate signal voltage to grid No.2 of each output tube.

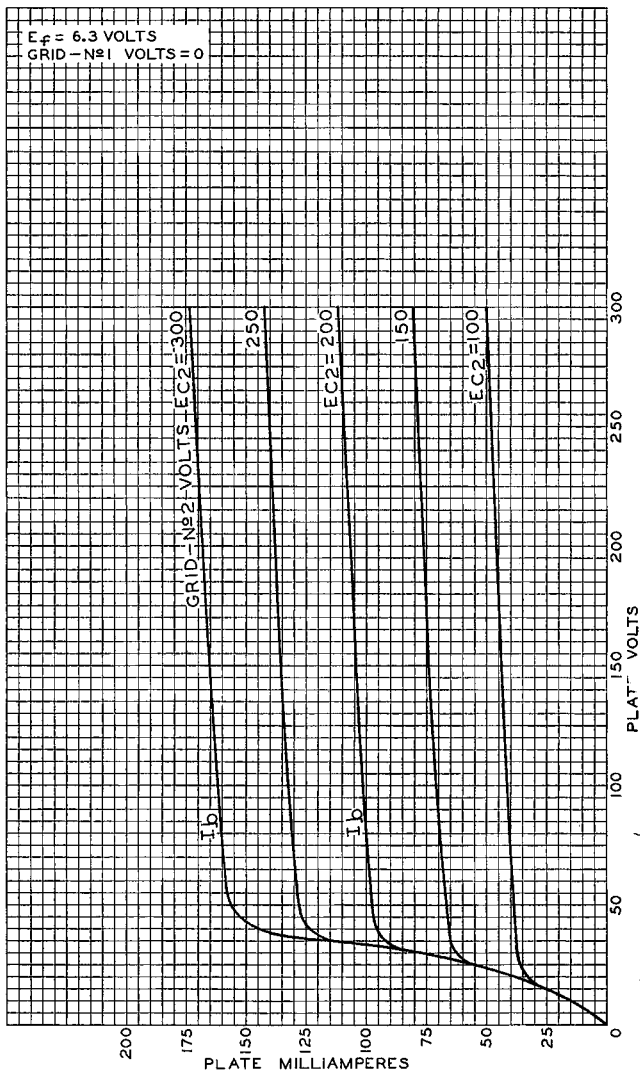
Obtained from taps on the primary winding of the output transformer. The taps are located on each side of the center tap (B+) so as to supply 43 per cent of the plate signal voltage to grid No.2 of each output tube.

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AVERAGE PLATE CHARACTERISTICS



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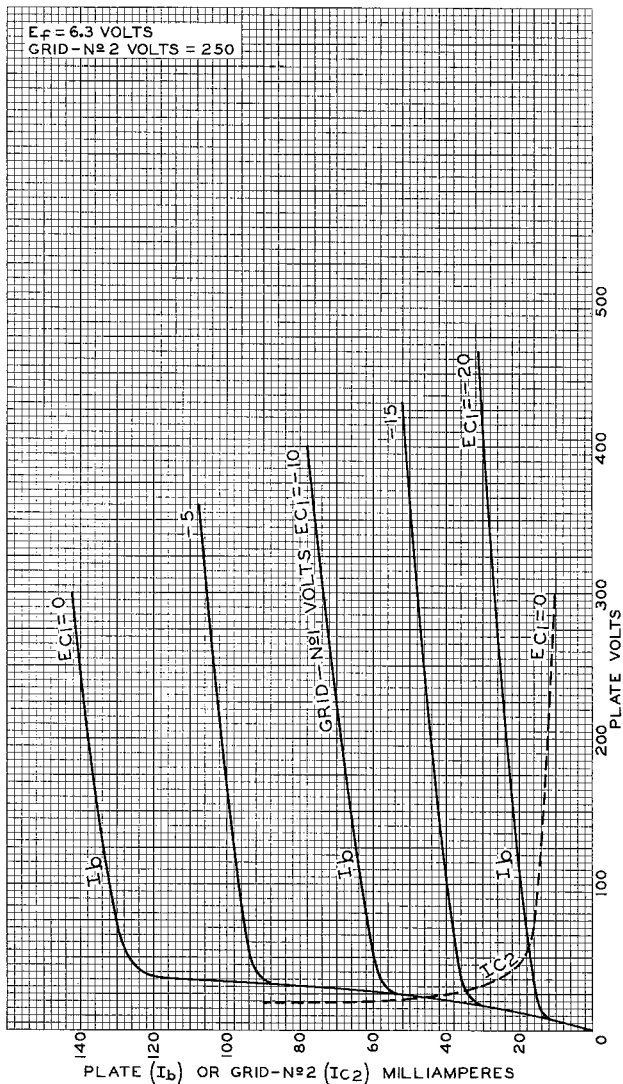
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AVERAGE CHARACTERISTICS

PLATE (I_b) OR GRID-N $\text{\#}2$ (I_{C2}) MILLIAMPERES

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OPERATION CHARACTERISTICS PUSH-PULL CLASS AB₁ OPERATION

