

Beam Power Tube

7-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater Characteristics and Ratings (*Design-Maximum Values*):

Current	0.150 ± 0.010	amp
Voltage (AC or DC) at heater amperes = 0.150	25.0	volts
Warm-up time (Average).	17	sec
Peak heater-cathode voltage:		
Heater negative with respect to cathode.	200	max. volts
Heater positive with respect to cathode.	200 ^a	max. volts

Direct Interelectrode Capacitances
(Approx.):^b

Grid No.1 to plate.	0.44	pf
Grid No.1 to cathode & grid No.3, grid No.2, and heater	12.0	pf
Plate to cathode & grid No.3, grid No.2, and heater	8.0	pf

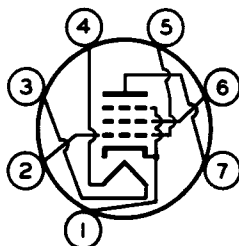
Characteristics, Class A₁ Amplifier:

Plate Voltage	110	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 Voltage	-7.5	volts
Plate Resistance (Approx.).	13000	ohms
Transconductance.	6400	μmhos
Plate Current	43	ma
Grid-No.2 Current	3.8	ma

Mechanical:

Operating Position.	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length.	2-5/8"
Maximum Seated Length.	2-3/8"
Length, Base Seat to Bulb Top (Excluding tip)	2" ± 3/32"
Diameter.	0.650" to 0.750"
Bulb.	T5-1/2
Base.	Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW.	7CV

Pin 1 - Cathode,
Grid No.3
Pin 2 - Grid No.1
Pin 3 - Heater



Pin 4 - Heater
Pin 5 - Grid No.1
Pin 6 - Grid No.2
Pin 7 - Plate



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AF POWER AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE	150 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	130 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive-bias value	0 max.	volts
GRID-No.2 INPUT	1.1 max.	watts
PLATE DISSIPATION	5.5 max.	watts
BULB TEMPERATURE (At hottest point on bulb surface).	220 max.	°C

Typical Operation:

Plate Voltage	110	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 Voltage	-7.5	volts
Peak AF Grid-No.1 Voltage	7.5	volts
Zero-Signal Plate Current	43	ma
Max.-Signal Plate Current	45	ma
Zero-Signal Grid-No.2 Current	3.8	ma
Max.-Signal Grid-No.2 Current	7.3	ma
Effective Load Resistance	2500	ohms
Total Harmonic Distortion	7	%
Maximum-Signal Power Output	1.5	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

PUSH-PULL AF POWER AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE	150 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	130 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive-bias value	0 max.	volts
GRID-No.2 INPUT	1.1 max.	watts
PLATE DISSIPATION	5.5 max.	watts
BULB TEMPERATURE (At hottest point on bulb surface).	220 max.	°C

Typical Operation:

Values are for two tubes

Plate Voltage	110	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 Voltage	-8	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage.	14.4	volts
Zero-Signal Plate Current	82	ma
Max.-Signal Plate Current	88	ma
Zero-Signal Grid-No.2 Current	7.2	ma
Max.-Signal Grid-No.2 Current	12.5	ma
Effective Load Resistance (Plate-to-plate).	4500	ohms



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Total Harmonic Distortion	2.6	%
Maximum-Signal Power Output	2.9	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

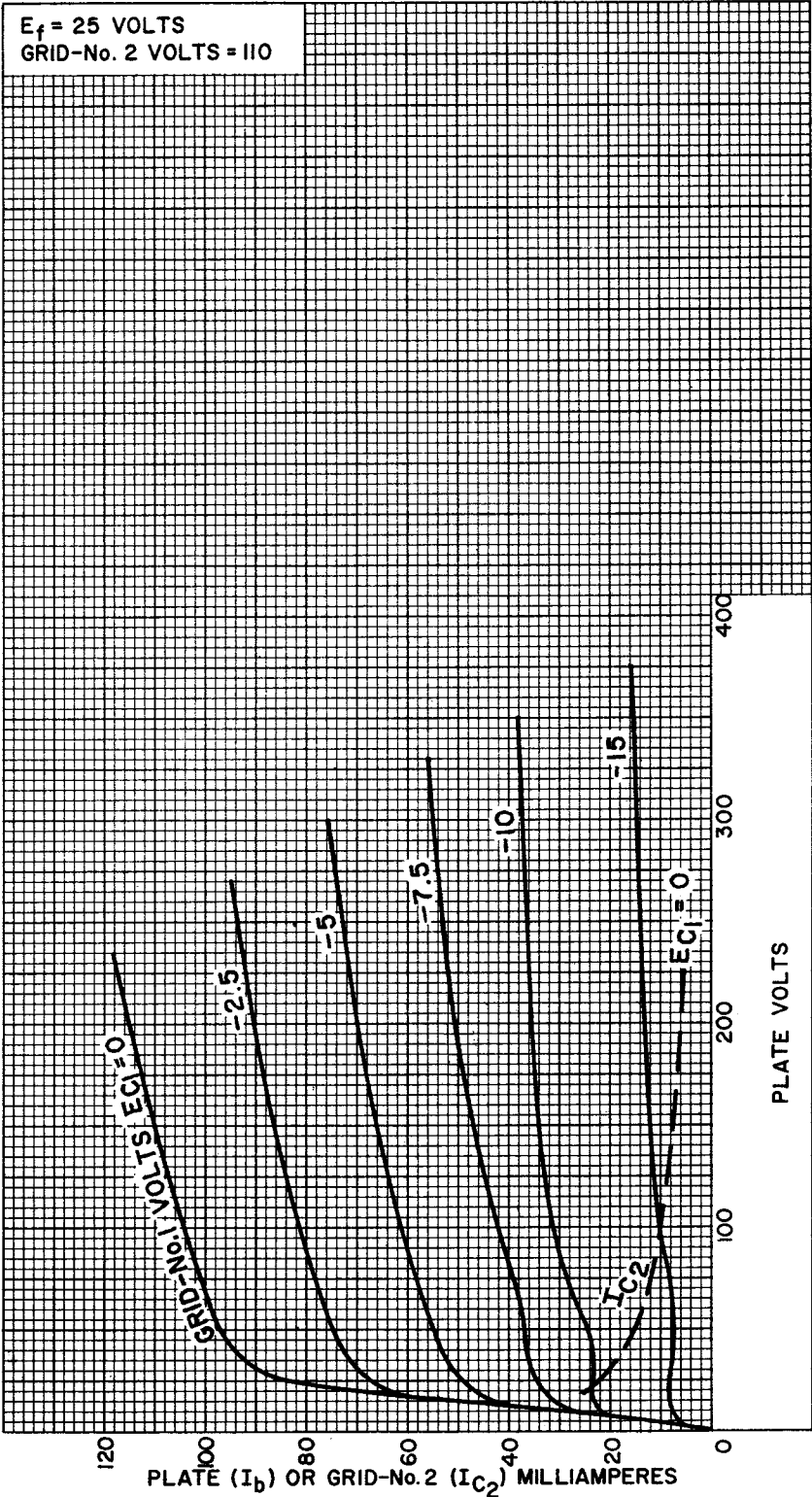
For fixed-bias operation.	0.1 max.	megohm
For cathode-bias operation.	0.5 max.	megohm

^a The dc component must not exceed 100 volts.

^b Without external shield.



AVERAGE CHARACTERISTICS

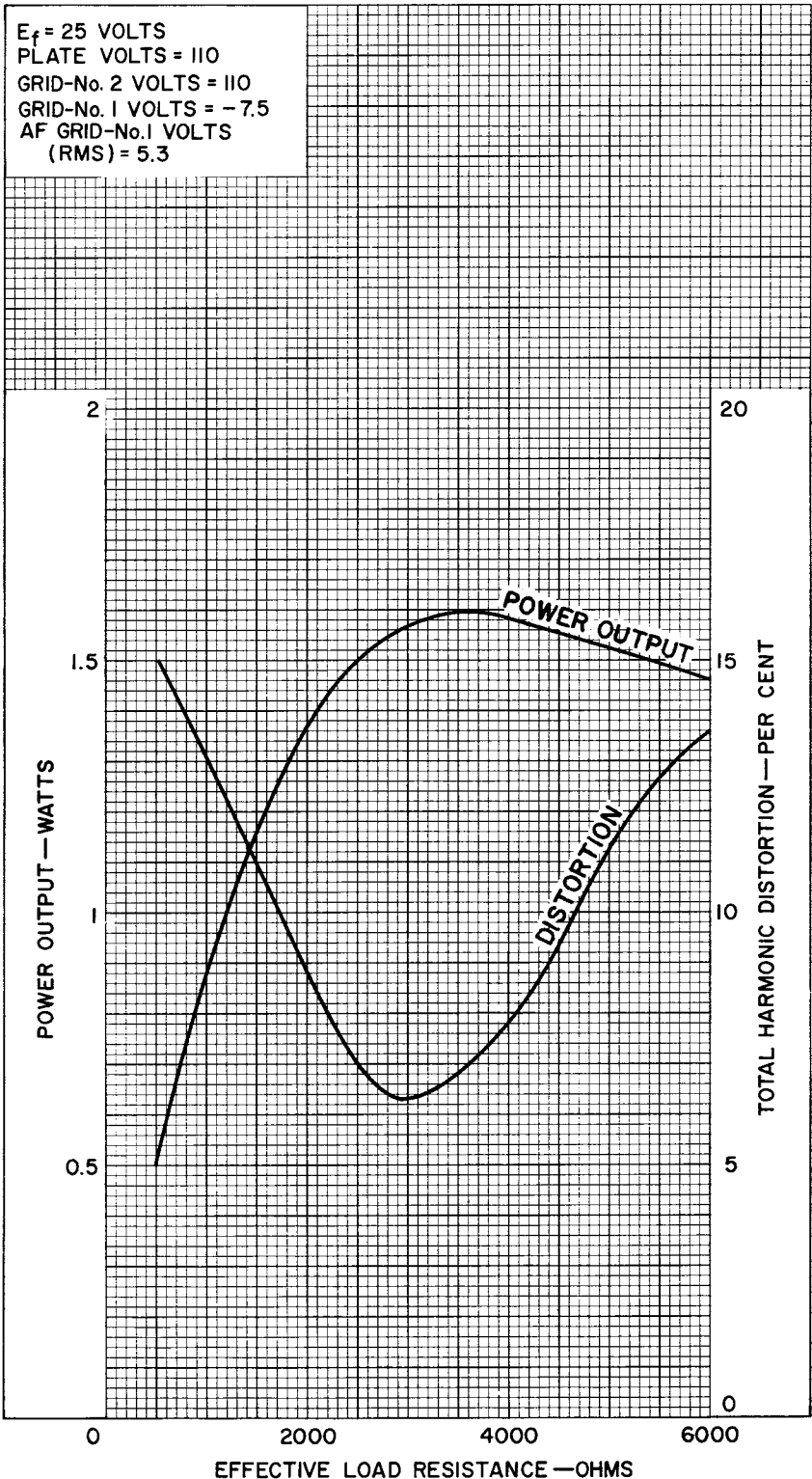


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OPERATION CHARACTERISTICS

$E_f = 25$ VOLTS
 PLATE VOLTS = 110
 GRID-No. 2 VOLTS = 110
 GRID-No. 1 VOLTS = -7.5
 AF GRID-No.1 VOLTS
 (RMS) = 5.3



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