

Beam Power Tube

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage (AC or DC)	6.3	volts
Current	0.45 ± 6%	amp
Warm-up time (Average)	11	sec

Direct Interelectrode Capacitances
(Approx.):^a

Grid-No.1 to plate	0.7	μf
Grid-No.1 to cathode & grid No.3, grid No.2, and heater	9	μf
Plate to cathode & grid No.3, grid No.2, and heater	7.5	μf

Characteristics, Class A₁ Amplifier:

		Triode Connection ^b	
Plate Voltage	250	250	volts
Grid-No.2 Voltage	250	—	volts
Grid-No.1 Voltage	-12.5	-12.5	volts
Amplification Factor	—	9.8	
Plate Resistance (Approx.)	50000	1960	ohms
Transconductance	4100	5000	μmhos
Plate Current	45	49.5	ma
Grid-No.2 Current	4.5	—	ma
Grid-No.1 Voltage (Approx.) for plate ma. = 0.5	—	-36	volts

Mechanical:

Operating Position	Any
Maximum Overall Length	3-5/16"
Maximum Seated Length	2-3/4"
Maximum Diameter	1-9/32"
Dimensional Outline	See General Section
Bulb	T9

Bases (Alternates):

Intermediate-Shell Octal:

7-Pin, Arrangement 1, (JEDEC Group 1, No.B7-7)

6-Pin, Arrangement 2, (JEDEC Group 1, No.B6-81)

Short Intermediate-Shell Octal with External Barriers:

7-Pin, (JEDEC Group 1, No.B7-59)

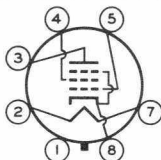
6-Pin, Arrangement 2, (JEDEC Group 1, No.B6-84)



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Basing Designation for BOTTOM VIEW. 7AC

Pin 1^c-No Connection
 Pin 2-Heater
 Pin 3-Plate
 Pin 4-Grid No.2



Pin 5-Grid No.1
 Pin 7-Heater
 Pin 8-Cathode, Grid No.3

AF POWER AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE	350	max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	315	max.	volts
GRID-No.2 INPUT	2.2	max.	watts
PLATE DISSIPATION	14	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.	200	max.	volts
Heater positive with respect to cathode.	200 ^d	max.	volts

Typical Operation and Characteristics:

Plate Voltage	180	250	315	volts
Grid-No.2 Voltage	180	250	225	volts
Grid-No.1 (Control-Grid) Voltage.	-8.5	-12.5	-13	volts
Peak AF Grid-No.1 Voltage	8.5	12.5	13	volts
Zero-Signal Plate Current	29	45	34	ma
Max.-Signal Plate Current	30	47	35	ma
Zero-Signal Grid-No.2 Current	3	4.5	2.2	ma
Max.-Signal Grid-No.2 Current	4	7	6	ma
Plate Resistance (Approx.)	50000	50000	80000	ohms
Transconductance	3700	4100	3750	μmhos
Load Resistance	3500	5000	8500	ohms
Total Harmonic Distortion	8	8	12	%
Max.-Signal Power Output.	2	4.5	5.5	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	350	max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	315	max.	volts
GRID-No.2 INPUT	2.2	max.	watts
PLATE DISSIPATION	14	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.	200	max.	volts
Heater positive with respect to cathode.	200 ^d	max.	volts



Typical Operation and Characteristics:

Values are for two tubes

Plate Voltage	250	285	volts
Grid-No.2 Voltage	250	285	volts
Grid-No.1 (Control-Grid) Voltage.	-15	-19	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage	30	38	volts
Zero-Signal Plate Current	70	70	ma
Max.-Signal Plate Current	79	92	ma
Zero-Signal Grid-No.2 Current	5	4	ma
Max.-Signal Grid-No.2 Current	13	13.5	ma
Effective Load Resistance (Plate to plate).	10000	8000	ohms
Total Harmonic Distortion	5	3.5	%
Maximum-Signal Power Output	10	14	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

VERTICAL-DEFLECTION AMPLIFIER

Triode Connection — Grid No.2 Connected to Plate

Maximum Ratings, Design-Maximum Values:

For operation in a 525-line, 30-frame system^e

DC PLATE VOLTAGE.	350	max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE ^f	1200	max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL-GRID) VOLTAGE.	275	max.	volts
CATHODE CURRENT:			
Peak.	115	max.	ma
Average	40	max.	ma
PLATE DISSIPATION	10	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.	200	max.	volts
Heater positive with respect to cathode.	200 ^d	max.	volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For cathode-bias operation.	2.2 max.	megohms
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^a Without external shield.

^b Grid No.2 connected to plate.

^c On the 6-pin bases, pin 1 as well as pin 6 is omitted.

^d The dc component must not exceed 100 volts.

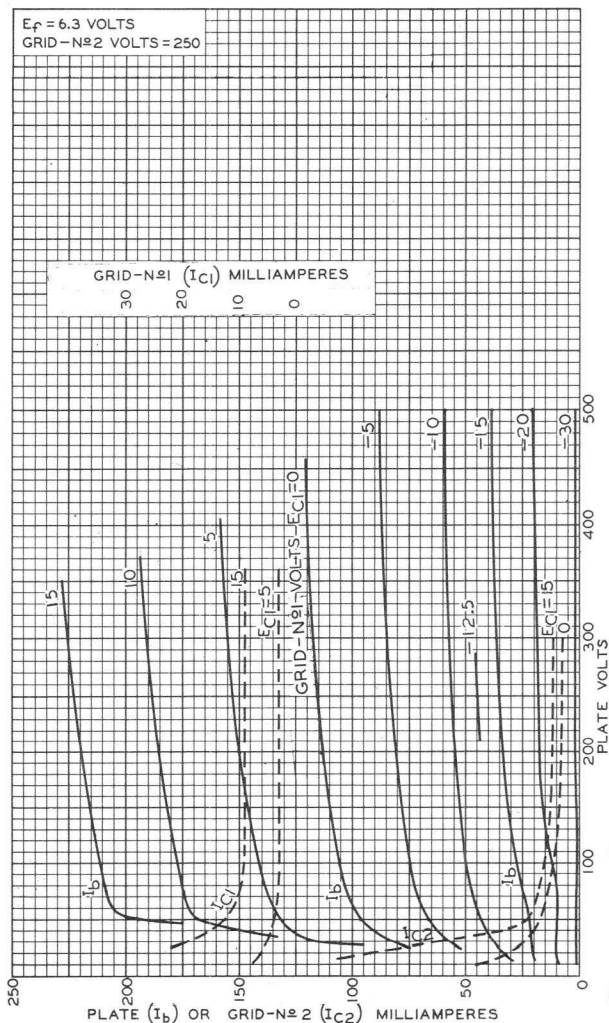
^e As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

^f This rating is applicable when the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.



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AVERAGE CHARACTERISTICS

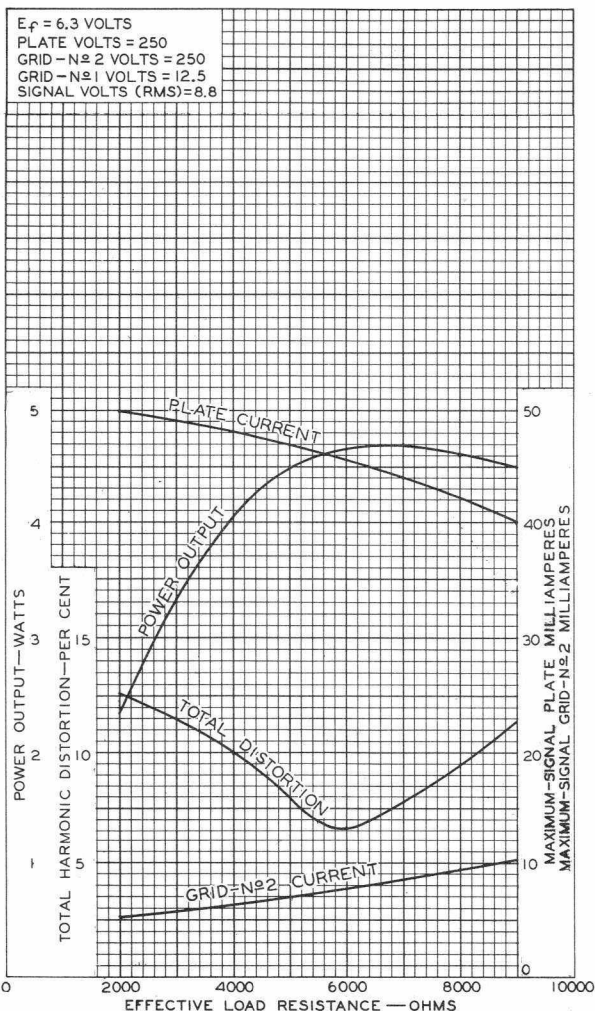


92CM-4807R2

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OPERATION CHARACTERISTICS



92CM-6339R2



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