

6V6GTA

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 | μhos |
| 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 <i>General Section</i> |
| 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)

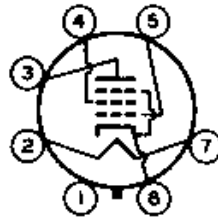
6-Pin, Arrangement 2, (JEDEC Group 1, No.B6-84)



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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 |

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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 |
|-------------------------------------|----------|---------|

^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.

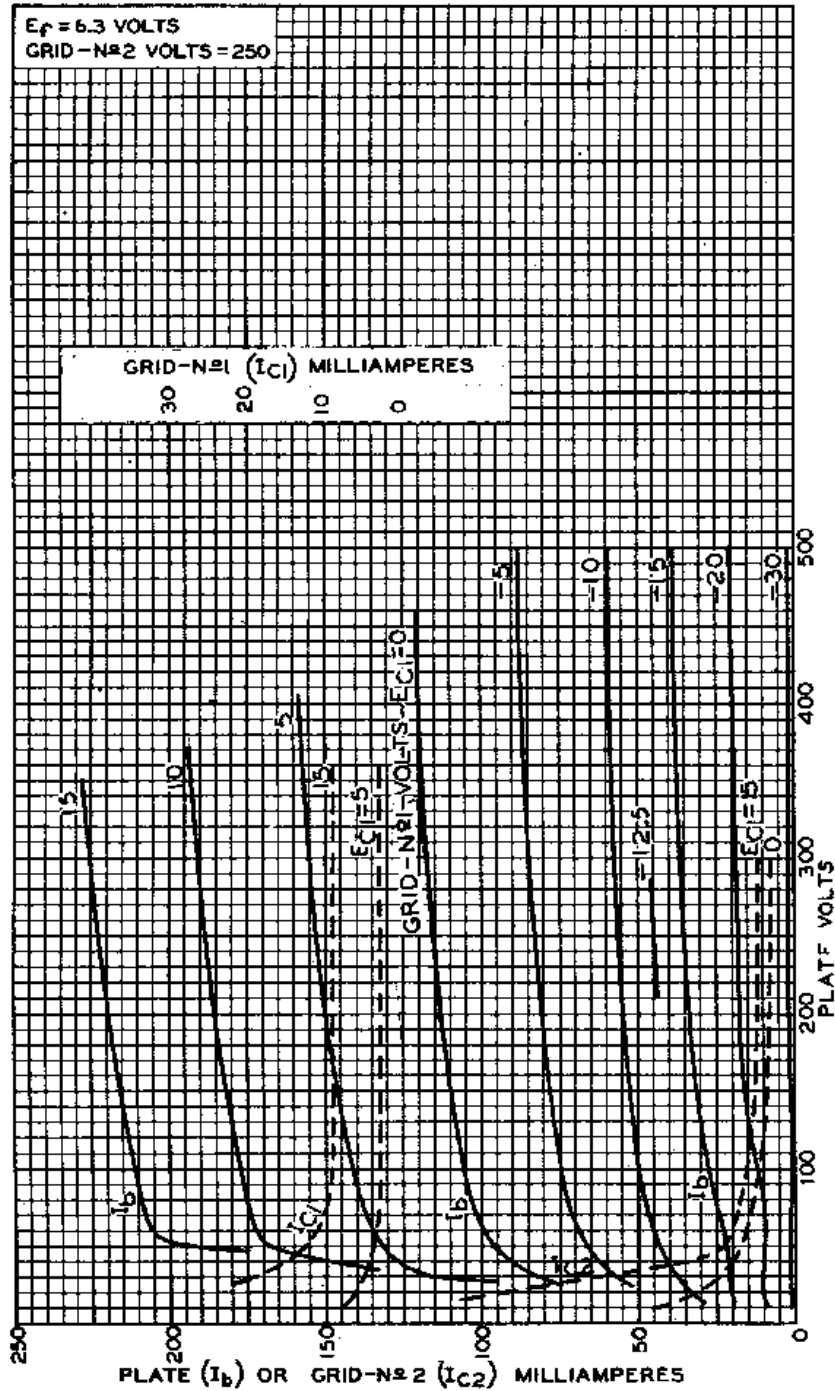


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DATA 2
1-62

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AVERAGE CHARACTERISTICS



92CM-4807R2

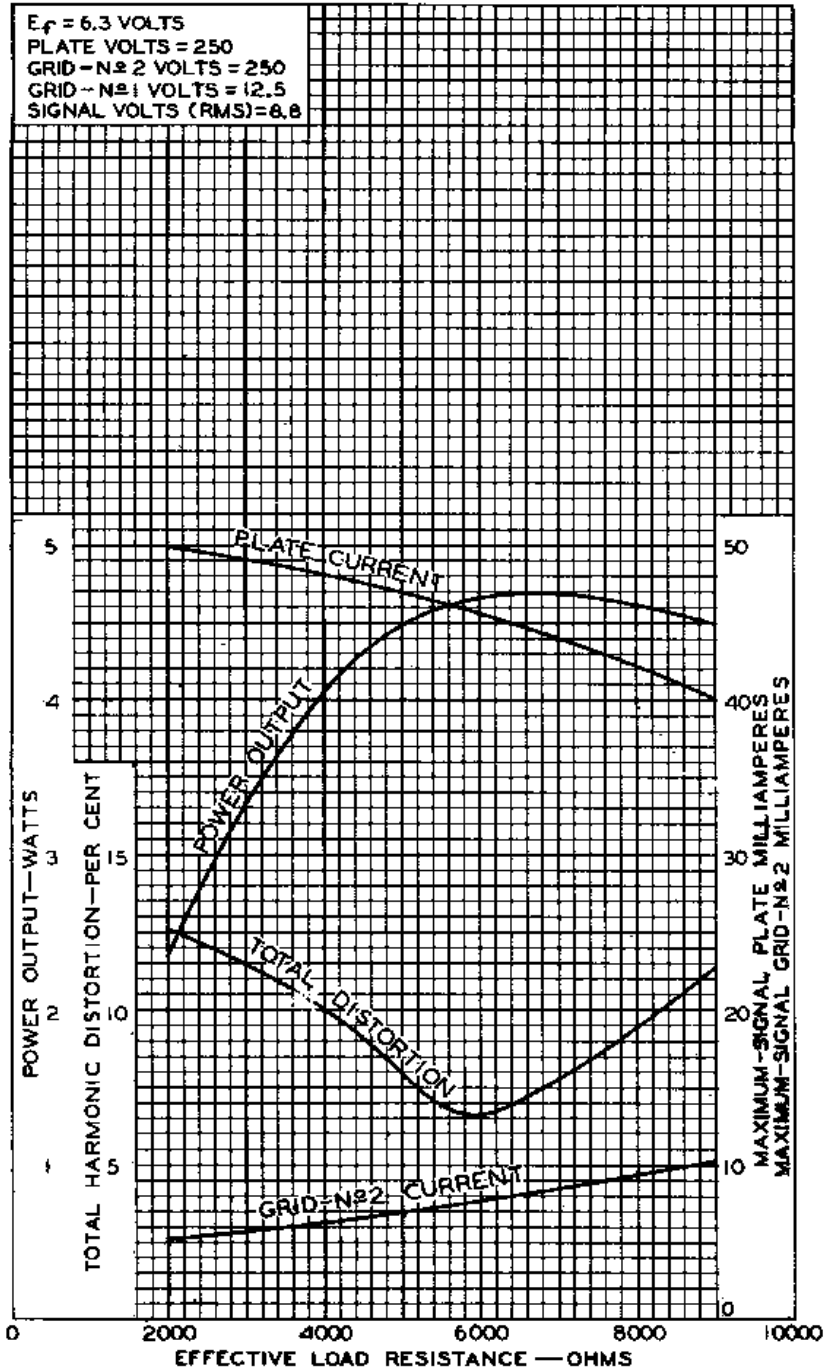
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OPERATION CHARACTERISTICS



92CM-6339R2



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