**6CB5-A**

**BEAM POWER TUBE**

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**GENERAL DATA**

**Electrical:**

Heater, for Unipotential Cathode:
- Voltage (AC or DC) ............... 6.3 ± 10% volts
- Current ......................... 2.5 amp

Direct Inter-electrode Capacitances (Approx.):
- Grid No.1 to plate ............... 0.4 μf
- Grid No.1 to cathode & grid No.3, grid No.2, and heater ........ 22 μf
- Plate to cathode & grid No.3, grid No.2, and heater .............. 10 μf

**Characteristics, Class A† Amplifier:**

- Plate Voltage ................... 75  175 volts
- Grid-No.2 Voltage ............... 150  175 volts
- Grid-No.1 Voltage ............... 0  -30 volts
- Mu-Factor, Grid No.2 to Grid No.1 ........ 3.8
- Plate Resistance (Approx.) ......... 5000 ohms
- Transconductance ................. 8800 μmhos
- Plate Current .................. 460*  90 ma
- Grid-No.2 Current ............... 42*  6 ma
- Grid-No.1 Voltage (Approx.) ........ for plate ma. = 1 .............. -60 volts

**Mechanical:**

- Operating Position ................ Any
- Maximum Overall Length ........... 5"
- Seated Length .................... 4-1/4" ± 3/16"
- Maximum Diameter ................ 1-23/32"
- Bulb .................. T12
- Cap .................. Small (JEDEC No.C1-1)
- Base .................. Short Jumbo-Shell Octal 8-Pin
- with External Barriers (JEDEC Group 1, No.B8-71), or Short Medium-Shell Octal 8-Pin
- with External Barriers, Style B (JEDEC Group 1, No.B8-118)
- Basing Designation for BOTTOM VIEW ................ 8GD

**Pin Numbering:**

- Pin 1-Grid No.2
- Pin 2-Heater
- Pin 3-Cathode, Grid No.3
- Pin 4-Grid No.1
- Pin 5-Grid No.1
- Pin 6-Cathode, Grid No.3
- Pin 7-Heater
- Pin 8-Grid No.2
- Cap-Plate

**HORIZONTAL-DEFLECTION AMPLIFIER**

**Maximum Ratings, Design-Maximum Values:**

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

- DC (including boost) PLATE VOLTAGE ........ 880 max. volts
- PEAK POSITIVE-PULSE PLATE VOLTAGE* .......... 6800 max. volts

* indicates a change.
PEAK NEGATIVE-PULSE PLATE VOLTAGE ... 1650 max. volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE ... 220 max. volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE ... -55 max. volts
PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE ... 220 max. volts

CATHODE CURRENT:
   Peak .................................... 850 max. ma
   DC ......................................... 240 max. ma

GRID-No.2 INPUT ............................ 4 max. watts
PLATE DISSIPATION† .......................... 26 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) .......... 220 max. °C

Maximum Circuit Values:
Grid-No.1-Circuit Resistance:
   For grid-resistor-bias operation ... 0.47 max. megohm

○ Without external shield.
* These values can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.
☐ As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.
† The duration of the voltage pulse must not exceed 15 per cent of one horizontal scanning cycle. in a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.
†+ An adequate bias resistor or other means is required to protect the tube in the absence of excitation.
† The dc component must not exceed 100 volts.
6CB5-A

BEAM POWER TUBE

SMALL CAP
JETEC No. CI-1

T12 BULB

SHORT
JUMBO-SHELL
OCTAL 8-PIN BASE
WITH
EXTERNAL BARRIERS
JETEC NoB8-7I
OR
SHORT
MEDIUM-SHELL
OCTAL 8-PIN BASE
WITH
EXTERNAL BARRIERS
STYLE B
JETEC NoB8-118

1 9/16” MAX.

4 1/4”
± 3/16”
5” MAX.

123/32” MAX.

92CS-8988R1
Average Characteristics

$E_C = 6.3$ Volts
Grid-N&2 Volts = 0

Grid-N&2 Milliamperes (Ic2)

Plate Milliamperes (Ib)

Plate Volts

Tube Division
Radio Corporation of America, Harrison, New Jersey

92CM-8437RI
$E_p = 6.3 \text{ VOLTS}$

$\text{GRID-N \#2 VOLTS} = 150$

**AVERAGE CHARACTERISTICS**

**GRID-N\#2 MILLIAMPERES ($I_{c2}$)**

**PLATE MILLIAMPERES ($I_b$)**

**PLATE VOLTS**

**TUBE DIVISION**

RADIO CORPORATION OF AMERICA, MARRISON, NEW JERSEY

92CM-8436