6CD6-GA
BEAM POWER TUBE
Supersedes Type 6CD6-G

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
  Voltage .................................. 6.3 .......... ac or dc volts
  Current .................................. 2.5 ................. amp
Direct Interelectrode Capacitances (Approx.): 0°
  Grid No.1 to plate .................................. 1.1 µuf
  Grid No.1 to cathode & grid No.3,
    grid No.2, and heater ...................... 22 µuf
  Plate to cathode & grid No.3,
    grid No.2, and heater ...................... 8.5 µuf

Characteristics, Class A1 Amplifier:
  Plate Voltage .................................. 60 175 volts
  Grid-No.2 (Screen-Grid) Voltage ............. 100 175 volts
  Grid-No.1 (Control-Grid) Voltage ............. 0 -30 volts
  Mu-Factor, Grid No.2 to Grid No.1 ........... - 3.9
  Plate Resistance (Approx.) .................. - 7200 ohms
  Transconductance ............................. - 7700 µmhos
  Plate Current .................................. 230* 75 ma
  Grid-No.2 Current ................................ 21* 5.5 ma
  Grid-No.1 Voltage (Approx.) for
    plate current of 1 ma ......................... - -55 volts

Mechanical:
  Mounting Position .......................... Vertical, base up or down, or
    Horizontal with pins 2 and 7 in vertical plane
  Maximum Overall Length ....................... 5"
  Seated Length ................................ 4-1/4" ± 3/16"
  Maximum Diameter ............................ 1-9/16"
  Bulb ........................................ T-12
  Cap .......................................... Small (JETEC No.C1-1)
  Base ........................................ Short Medium-Shell Octal 8-Pin
    with External Barriers, Style A (JETEC No.B8-110),
    or Short Medium-Shell Octal 8-Pin
    with External Barriers, Style B (JETEC No.BB-118)

Basing Designation for BOTTOM VIEW ............ 5BT

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

* Without external shield.
* These values can be measured by a method involving a recurrent wave form such that the cathode current will be kept within ratings in order to prevent damage to the tube.
HORIZONTAL DEFLECTION AMPLIFIER

Maximum Ratings, Design-Center Values Except as Noted:

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

DC PLATE VOLTAGE . . . . . . . . . . . . 700 max. volts
PEAK POSITIVE-PULSE PLATE VOLTAGE
(Absolute maximum) . . . . . . . . . . . . 7000 max. volts
PEAK NEGATIVE-PULSE PLATE VOLTAGE . . . . . 1500 max. volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE . . . . . 175 max. volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE . . . . -50 max. volts
PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE . . . . 200 max. volts
CATHODE CURRENT:
  Peak . . . . . . . . . . . . . . . . . . . . . . . . 700 max. ma
  Average. . . . . . . . . . . . . . . . . . . . . . 200 max. ma
GRID-No.2 INPUT . . . . . . . . . . . . . . . . . . . . 3 max. watts
PLATE DISSIPATION† . . . . . . . . . . . . . . . . . . 20 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) . . . . . . . . . . . . . . . . . 225 max. °C

Maximum Circuit Values:

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

☐ As described in "Standards of Good Engineering Practice Concerning
  Television Broadcast Stations", Federal Communications Commission.
☐ Under no circumstances should this absolute value be exceeded.
☐ 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.
† It is essential that the plate dissipation be limited in the event of
  loss of grid signal. For this purpose, some protective means such as a
  cathode resistor of suitable value should be employed.
▲ The dc component must not exceed 100 volts.
AVERAGE CHARACTERISTICS

$E_F = 6.3 \text{ VOLTS}$
$\text{GRID-N & 2 VOLTS}=175$

GRID-N & 2 MILLIAMPERES ($I_{C2}$)

PLATE MILLIAMPERES ($I_B$)

PLATE VOLTS
$E_p = 6.3$ VOLTS
GRID-$N^\#1$ VOLTS = 0

GRID-$N^\#2$ MILLIAMPERES ($I_{C_2}$)

PLATE MILLIAMPERES ($I_B$)
TUBE DIVISION

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