Beam Power Tube

7-PIN MINIATURE TYPE

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
Voltage (AC or DC) .................. 35 ± 10% volts
Current at 35 volts .................. 0.15 amp
Direct Interelectrode Capacitances (Approx.):
Grid No.1 to plate .................. 0.6 μf
Grid No.1 to cathode & grid No.3,
grid No.2, and heater ............... 12 μf
Plate to cathode & grid No.3,
grid No.2, and heater ............... 9 μf

Mechanical:
Operating Position .................. Any
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"
Dimensional Outline .................. See General Section
Bulb ....................................... T5-1/2
Base ..................................... Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW ............... 7CV

Pin 1—Cathode
Pin 4—Heater
Pin 2—Grid No.1
Pin 5—Grid No.1
Pin 3—Heater
Pin 6—Grid No.2
Pin 7—Plate
Pin 8—Grid No.3

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 .............. 5.2 max. watts
PEAK HEATER—CATHODE VOLTAGE:
Heater negative with
respect to cathode .................. 200 max. volts
Heater positive with
respect to cathode .................. 200b max. volts
BULB TEMPERATURE (At hottest point
on bulb surface) .................. 250 max. °C

--- indicates a change.
Typical Operation and Characteristics:

- Plate Voltage: 110 volts
- Grid-No.2 Voltage: 110 volts
- Grid-No.1 (Control-Grid) Voltage: -7.5 volts
- Peak AF Grid-No.1 Voltage: 7.5 volts
- Zero-Signal Plate Current: 40 ma
- Max.-Signal Plate Current: 41 ma
- Zero-Signal Grid-No.2 Current: 3 ma
- Max.-Signal Grid-No.2 Current: 7 ma
- Plate Resistance (Approx.): 13000 ohms
- Transconductance: 5800 $\mu$hos
- Load Resistance: 2500 ohms
- Total Harmonic Distortion: 10%
- Max.-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

  a Without external shield.
  b The dc component must not exceed 100 volts.
OPERATION CHARACTERISTICS

- $E_f = 35$ VOLTS
- PLATE VOLTS = 110
- GRID-No.2 VOLTS = 110
- GRID-No.1 VOLTS = -7.5
- RMS SIGNAL VOLTS = 5.3

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<th>Load Resistance (Ohms)</th>
<th>Power Output (Watts)</th>
<th>Total Harmonic Distortion (%)</th>
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92CM-6794

RADIO CORPORATION OF AMERICA
Electron Tube Division
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