Power Pentode

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 .................. 0.65 \(\mu\)f
Grid No.1 to cathode & grid No.3,
grid No.2, and heater ............... 17 \(\mu\)f
Plate to cathode & grid No.3,
grid No.2, and heater ............... 9 \(\mu\)f

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

AF POWER AMPLIFIER — Class A\^)

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 .................. 1.75 max. watts
PLATE DISSIPATION ................. 6 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. \(\degree\)C

\(^{\uparrow}\) See General Section.
Typical Operation and Characteristics:

Plate Supply Voltage. .................. 110 volts
Grid-No.2 Supply Voltage. .............. 115 volts
Cathode Resistor. ........................ 62 ohms
Peak AF Grid-No.1 Voltage ................. 3 volts
Zero-Signal Plate Current .................. 32 ma
Max.-Signal Plate Current ................. 32 ma
Zero-Signal Grid-No.2 Current ............. 7.2 ma
Max.-Signal Grid-No.2 Current ............. 12 ma
Plate Resistance (Approx.) ................ 14000 ohms
Transconductance ....................... 12000 μmhos
Load Resistance .......................... 3000 ohms
Total Harmonic Distortion ................. 8 %
Max.-Signal Power Output .................. 1.2 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

▲ Without external shield.
■ The dc component must not exceed 100 volts.
OPERATION CHARACTERISTICS

E_p = 35 VOLTS
PLATE SUPPLY VOLTS = 110
GRID-N=2 SUPPLY VOLTS = 115
CATHODE RESISTOR (OHMS) = 62
CATHODE-BYPASS CAPACITOR (μF) = 100
SIGNAL VOLTS (RMS) = 2.1

POWER OUTPUT — WATTS

TOTAL HARMONIC DISTORTION — PER CENT

LOAD RESISTANCE — OHMS

92CM-10547