SHARP-CUTOFF TETRODE
7-PIN MINIATURE TYPE

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
  Voltage ........................................ 6.3 ± 10% ...... ac or dc volts
  Current ........................................ 0.2 ................. amp
Direct Interelectrode Capacitances:
  Grid No.1 to plate ................................ 0.03 max. ....... μf
  Grid No.1 to cathode, grid No.2, internal shield, and heater ........... 4.5 ....... μf
  Plate to cathode, grid No.2, internal shield, and heater ............... 3 ....... μf
  Cathode to heater ................................ 2.7* ............... μf

Characteristics, Class A\textsubscript{1} Amplifier:
Plate Voltage ...................................... 125 .......... volts
Grid-No.2 (Screen-grid) Voltage ..................... 80 .......... volts
Grid-No.1 (Control-grid) Voltage .................... -1 .......... volt
Plate Resistance (Approx.) .......................... 0.1 ....... megohm
Transconductance ................................... 8000 ...... μmhos
Plate Current ...................................... 10 ........... ma
Grid-No.2 Current .................................. 1.5 ........... ma
Grid-No.1 Voltage (Approx.) for plate μa = 20 .............. -6 .......... volts

Mechanical:
Operating Position .................................. Any
Maximum Overall Length ................................ 2-1/8"
Maximum Seated Length ................................ 1-7/8"
Length, Base Seat to Bulb Top (Excluding tip) .... 1-1/2" ± 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 ................. 7FQ

Pin 1 – Grid No.1
Pin 2 – Internal Shield
Pin 3 – Heater
Pin 4 – Heater
Pin 5 – Plate
Pin 6 – Grid No.2
Pin 7 – Cathode

AMPLIFIER — Class A\textsubscript{1}

Maximum Ratings, Design-Maximum Values:
PLATE VOLTAGE ..................................... 275 max. ........ volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE ........... 180 max. ........ volts
GRID-No.2 VOLTAGE ................................ See Grid-No.2 Input Rating Chart at front of Receiving Tube Section

6-59

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TENTATIVE DATA
SHARP-CUTOFF TETRODE

GRID-No.1 (CONTROL-GRID) VOLTAGE:
Positive bias value .......... 0 max. volts
CATHODE CURRENT .......... 20 max. ma

GRID-No.2 INPUT:
For grid-No.2 voltages up to
90 volts .................... 0.5 max. watt
For grid-No.2 voltages between
90 and 180 volts .......... See Grid-No.2 Input Rating Chart
at front of Receiving Tube Section

PLATE DISSIPATION .......... 2 max. watts

PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode. 200 max. volts
Heater positive with respect to cathode. 200* max. volts

Maximum Circuit Values:
Grid-No.1-Circuit Resistance .... 0.5 max. megohm

* With external shield JEDEC No.316 connected to cathode except as noted.
* With external shield JEDEC No.316 connected to ground.
* The dc component must not exceed 100 volts.
AVERAGE CHARACTERISTICS

$E_C = 6.3\ \text{VOLTS}$

$\text{GRID-N\#2 VOLTS} = 80$

PLATE ($I_B$) OR GRID-N\#2 ($I_C$) MILLIAMPERES

350
300
250
200
150
100
50
0

PLATE VOLTS

0

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92CM-10058
AVERAGE CHARACTERISTICS

$E_c = 6.3$ VOLTS
PLATE VOLTS = 125
GRID-N°2 VOLTS = 80

TRANSCONDUCTANCE ($g_m$) - MICROMOHMS

GRID-N°1 VOLTS

PLATE ($I_p$) OR GRID-N°2 ($I_{G2}$) MILLIAMPERES

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92CM-9519