6BZ6
SEMIREMOTE-CUTOFF PENTODE
7-PIN MINIATURE TYPE

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
Voltage (AC or DC) ............. 6.3 ± 10% volts
Current ...................... 0.3 amp
Direct Interelectrode Capacitances:

\[
\begin{array}{c|c|c}
\text{Without} & \text{With} \\
\text{External} & \text{External} \\
\text{Shield} & \text{Shield}^o \\
\hline
\text{Grid No.1 to plate} & 0.025 \text{ max.} & 0.015 \text{ max.} \ \mu f \\
\text{Grid No.1 to cathode,} & & \\
\text{grid No.3 & internal shield,} & & \\
\text{grid No.2, and heater} & 7 & 7 \ \mu f \\
\text{Plate to cathode, grid No.3} & & \\
& \text{& internal shield, grid No.2,} & \\
& \text{and heater} & 2 & 3 \ \mu f \\
\end{array}
\]

Characteristics, Class A1 Amplifier:
Plate Supply Voltage .................. 125 volts
Grid No.3 .......................... Connected to cathode at socket
Grid-No.2 Supply Voltage ............. 125 volts
Cathode Resistor ..................... 56 ohms
Plate Resistance (Approx.) .......... 0.26 megalohm
Transconductance ................. 8000 \ \mu \text{hohms}
Plate Current ................. 0.14 ma
Grid-No.2 Current ................. 3.6 ma
Grid-No.1 Voltage (Approx.) for trans-
conductance (\mu \text{hohms}) = 50 ........ -19 volts
Grid-No.1 Voltage (Approx.) for trans-
conductance (\mu \text{hohms}) = 700 and cathode
resistor (ohms) = 0 ........ -4.5 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 ........ 7CM

Pin 1 – Grid No.1
Pin 2 – Cathode
Pin 3 – Heater
Pin 4 – Heater
Pin 5 – Plate

Pin 6 – Grid No.2
Pin 7 – Grid No.3, Internal Shield

Indicates a change.
SEMIREMOTE-CUTOFF PENTODE

AMPLIFIER — Class A

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE ............... 330 max. volts
GRID-No.3 (SUPPRESSOR-GRID) VOLTAGE .. 0 max. volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE. 330 max. volts
GRID-No.2 VOLTAGE ........... See Grid-No.2 Input Rating Chart at front of Receiving Tube Section
GRID-No.1 (CONTROL-GRID) VOLTAGE:
   Positive-bias value .......... 0 max. volts
GRID-No.2 INPUT:
   For grid-No.2 voltages up to
   165 volts ................... 0.55 max. watt
   For grid-No.2 voltages between 165
   and 330 volts .............. See Grid-No.2 Input Rating Chart at front of Receiving Tube Section
PLATE DISSIPATION ............. 2.3 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:
   For fixed-bias operation. .... 0.25 max. megohm
   For cathode-bias operation. ... 1 max. megohm

O With external shield JEDEC No.316 connected to cathode.
A The dc component must not exceed 100 volts.

Indicates a change.
Average Characteristics

$E_g = 6.3$ Volts

Grid-No. 3 Volts = 0

Grid-No. 2 Volts = 125

Plate (I_b) or Grid-No. 2 (I_c2) Milliamperes

Electron Tube Division
Radio Corporation of America, Harrison, New Jersey
E.F. = 6.3 VOLTS
PLATE VOLTS = 125
GRID-N°3 VOLTS = 0

GRID-N°1 VOLTS

PLATE MILLIAMPERES

GRID-N°2 VOLTS

150
100
50
15
10
5
20
25
30

-20
-15
-10
-5
0
6BZ6

AVERAGE CHARACTERISTICS

E<sub>c</sub> = 6.3 VOLTS
PLATE VOLTS = 125
GRID-N°3 VOLTS = 0

TRANSCONDUCTANCE (g<sub>m</sub>) — MICROHMS

GRID-N°1 VOLTS

GRID-N°2 VOLTS E<sub>C2</sub> = 150 125 100 75 50

-24 -20 -16 -12 -8 -4 0