

Semiremote-Cutoff Pentode

7-PIN MINIATURE TYPE

For Intermediate-Frequency-Amplifier Applications in FM, AM, and AM/FM Receivers

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater Characteristics and Ratings (*Design-Maximum Values*):

Voltage (AC or DC). 6.3^a 6.3 ± 0.6 volts

Current 0.450 ± 0.030 0.450^b amp

Warm-up time (Average). 11 sec

Peak heater-cathode

voltage:

Heater negative with

respect to cathode. 200 max.

volts

Heater positive with

respect to cathode. 200^c max.

volts

Direct Interelectrode Capacitances:^d

Grid No.1 to plate. 0.006 max. μf

Grid No.1 to cathode, grid No.3 &
internal shield, grid No.2,
and heater. 8.8 μf

Plate to cathode, grid No.3 &
internal shield, grid No.2,
and heater. 5.2 μf

Characteristics, Class A₁ Amplifier:

Plate Supply Voltage. 200 volts

Grid No.3 *Connected to cathode at socket*

Grid-No.2 Supply Voltage. 115 volts

Grid-No.1 Supply Voltage. 0 volts

Cathode Resistor. 68 ohms

Plate Resistance (Approx.). 0.5 megohm

Transconductance. 8500 μmhos

Plate Current 13.2 ma

Grid-No.2 Current 4.3 ma

Grid-No.1 Voltage (Approx.) for
transconductance (μmhos) = 60 -15 volts

Mechanical:

Operating Position. Any

Type of Cathode Coated Unipotential

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

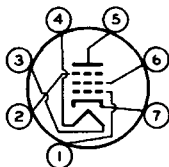
Base. Small-Button Miniature 7-Pin (JEDEC No.E7-1)



6HR6

Basing Designation for BOTTOM VIEW. 7BK

Pin 1—Grid No.1
Pin 2—Grid No.3,
Internal
Shield
Pin 3—Heater



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

AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE 300 max. volts
GRID No.3 (SUPPRESSOR GRID) Connect to cathode at socket
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE. . . 300 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:

Negative-bias value 50 max. volts
Positive-bias value 0 max. volts

GRID-No.2 INPUT:

For grid-No.2 voltages
up to 150 volts 1 max. watt

For grid-No.2 voltages be-
tween 150 and 300 volts . See Grid-No.2 Input Rating Chart
at front of Receiving Tube Section

PLATE DISSIPATION 3 max. watts

Maximum Circuit Values:

Grid-No.1—Circuit Resistance:

For fixed-bias operation. 0.5 max. megohm
For cathode-bias operation. 1 max. megohm

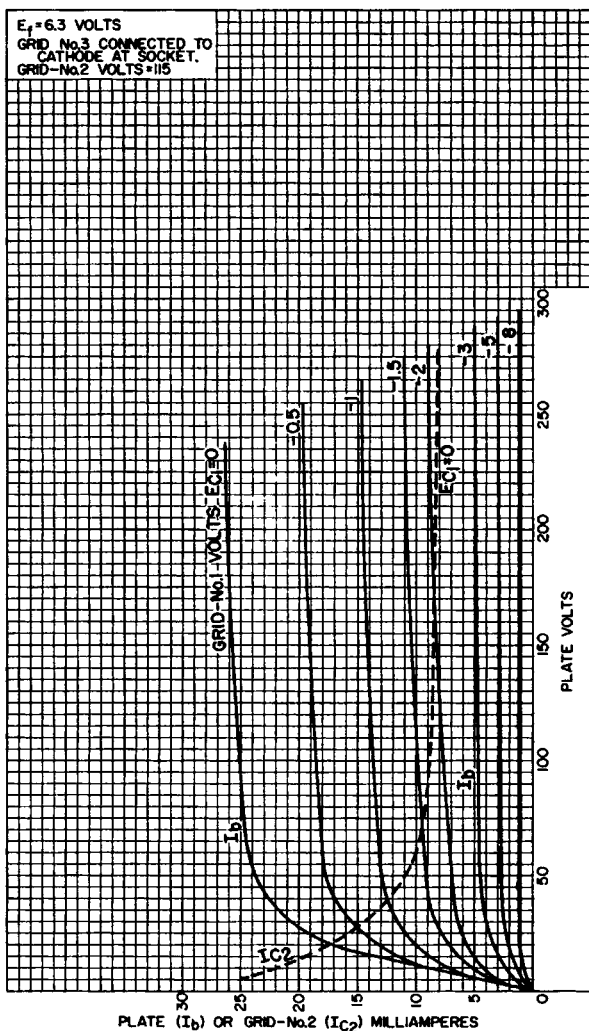
^a At heater amperes = 0.450.

^b At heater volts = 6.3.

^c The dc component must not exceed 100 volts.

^d Without external shield.

AVERAGE CHARACTERISTICS



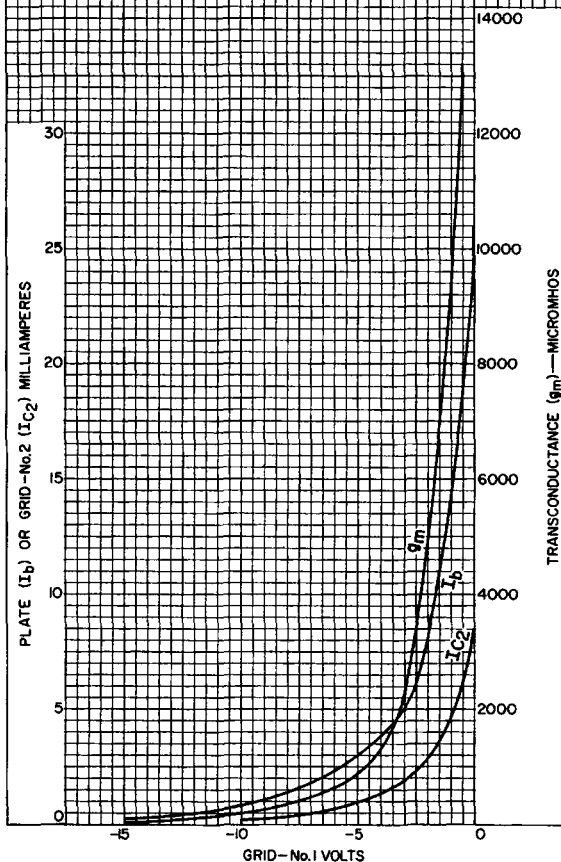
92CM-11530



6HR6

AVERAGE CHARACTERISTICS

$E_f = 6.3$ VOLTS
 PLATE VOLTS = 200
 GRID No.3 CONNECTED
 TO CATHODE AT SOCKET.
 GRID-No.2 VOLTS = 115



92CM-11533

