

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. μ f

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

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

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 μ hos

Plate Current 13.2 ma

Grid-No.2 Current 4.3 ma

Grid-No.1 Voltage (Approx.) for transconductance (μ hos) = 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

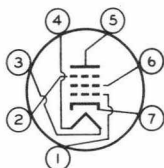
Base Small-Button Miniature 7-Pin (JEDEC No.E7-1)



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

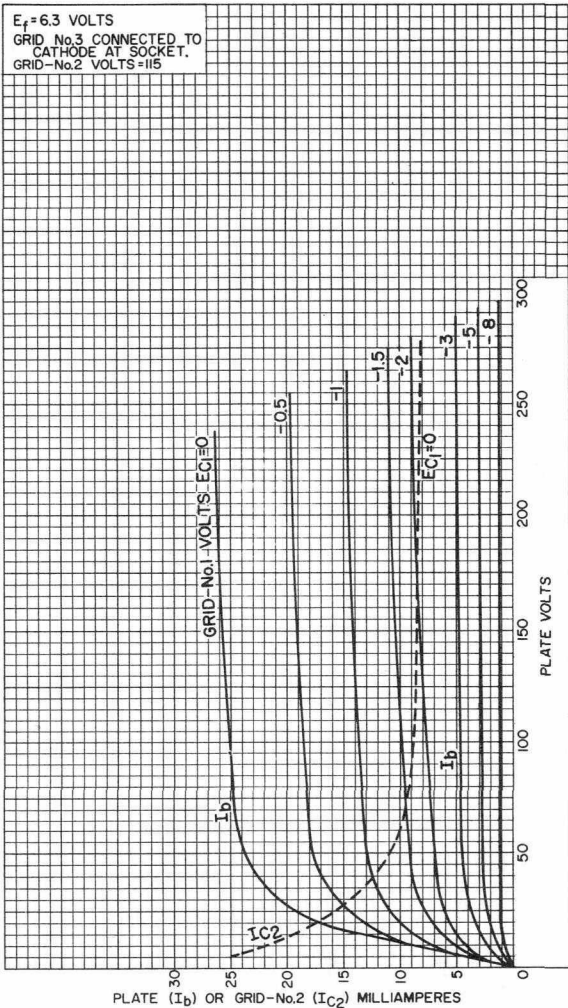
Maximum Circuit Values:

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

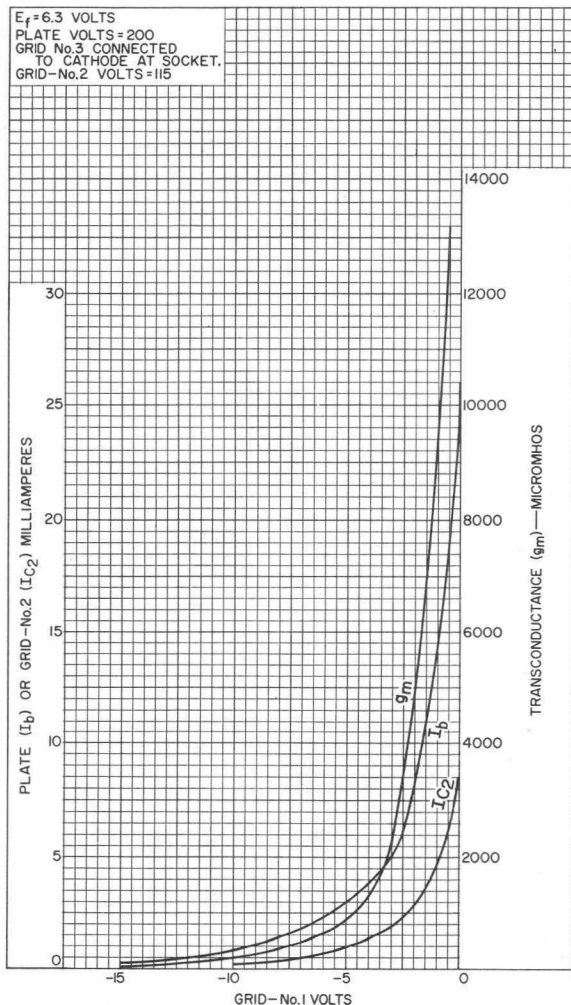
$E_f = 6.3$ VOLTS
 GRID No.3 CONNECTED TO
 CATHODE AT SOCKET.
 GRID-No.2 VOLTS = 115



92CM-11530



AVERAGE CHARACTERISTICS



92CM-11533