

## 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 ( <i>Design-Maximum Values</i> ):			
Voltage (AC or DC) . . . . .	6.3 <sup>a</sup>	6.3 ± 0.6	volts
Current . . . . .	0.450 ± 0.030	0.450 <sup>b</sup>	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 <sup>c</sup>	max.	volts
Direct Interelectrode Capacitances: <sup>d</sup>			
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 A<sub>1</sub> 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:

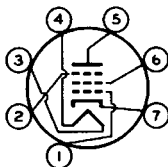
Operating Position . . . . .	Any
Type of Cathode . . . . .	Coated Unipotential
Maximum Overall Length . . . . .	2-1/8"
Maximum Seated Length . . . . .	1-7/8"
Length, Base Seat to Bulb Top (Excluding tip) . . . . .	1-1/2" ± 3/32"
Diameter . . . . .	0.650" to 0.750"
Dimensional Outline . . . . .	See <i>General Section</i>
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 A<sub>1</sub>

### 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

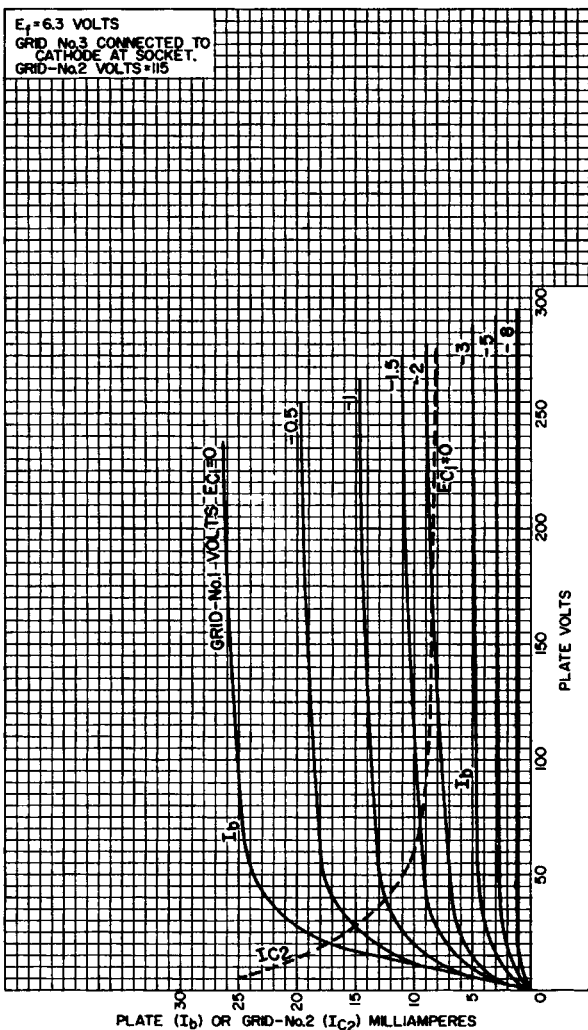
### Maximum Circuit Values:

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

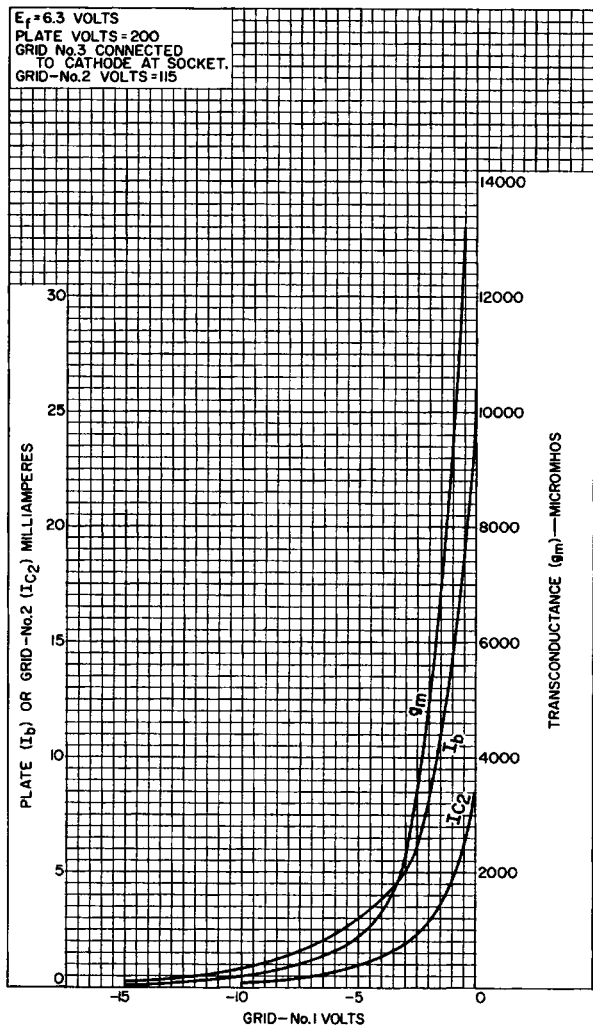


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## AVERAGE CHARACTERISTICS



92CM-11533

