

# 6EH7

## Semiremote-Cutoff Pentode

### 9-PIN MINIATURE TYPE

#### GENERAL DATA

#### Electrical:

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

Voltage (AC or DC) . . . . .  $6.3 \pm 0.6$  volts

Current at heater volts = 6.3 . . . . . 0.300 amp

Peak heater-cathode voltage:

Heater negative with respect to cathode . . . . . 150 max. volts

Heater positive with respect to cathode . . . . . 150 max. volts

Direct Interelectrode Capacitances:<sup>a</sup>

Grid No.1 to plate . . . . . 0.005 max.  $\mu\text{mf}$

Grid No.1 to cathode, grid No.3, grid No.2, internal shield, and heater . . . . . 9  $\mu\text{mf}$

Plate to cathode, grid No.3, grid No.2, internal shield, and heater . . . . . 3  $\mu\text{mf}$

#### Characteristics, Class A<sub>1</sub> Amplifier:

Plate Voltage . . . . . 200 volts

Grid No.3 . . . . . *Connected to cathode at socket*

Grid-No.2 Voltage . . . . . 90 volts

Grid-No.1 Voltage . . . . . -2 volts

Plate Resistance (Approx.) . . . . . 0.5 megohm

Transconductance . . . . . 12500  $\mu\text{mhos}$

Plate Current . . . . . 12 ma

Grid-No.2 Current . . . . . 4.5 ma

#### Mechanical:

Operating Position . . . . . Any

Type of Cathode . . . . . Coated Unipotential

Maximum Overall Length . . . . . 2-13/32"

Maximum Seated Length . . . . . 2-5/32"

Length, Base Seat to Bulb Top (Excluding tip) . 1-25/32"  $\pm$  3/32"

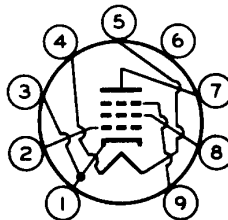
Diameter . . . . . 0.750" to 0.875"

Bulb . . . . . T6-1/2

Base . . . . . Small-Button Noval 9-Pin (JEDEC No.E9-1)

Basing Designation for BOTTOM VIEW . . . . . 9AQ

Pin 1 - Cathode  
Pin 2 - Grid No.1  
Pin 3 - Cathode  
Pin 4 - Heater  
Pin 5 - Heater



Pin 6 - Internal Shield  
Pin 7 - Plate  
Pin 8 - Grid No.2  
Pin 9 - Grid No.3



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## AMPLIFIER — Class A<sub>1</sub>

### Maximum Ratings, Design-Center Values:

PLATE SUPPLY VOLTAGE . . . . .	550 max.	volts
PLATE VOLTAGE . . . . .	250 max.	volts
GRID No.3 (SUPPRESSOR GRID) . . .	<i>Connect to cathode at socket</i>	
GRID No.2 (SCREEN-GRID) SUPPLY VOLTAGE . . .	550 max.	volts
GRID-No.2 VOLTAGE . . . . .	250 max.	volts
CATHODE CURRENT . . . . .	20 max.	ma
GRID-No.2 INPUT . . . . .	0.65 max.	watt
PLATE DISSIPATION . . . . .	2.5 max.	watts

### Typical Operation:

Plate Voltage . . . . .	200	200	200	200	volts
Grid No.3 . . . . .	<i>Connected to cathode at socket</i>				
Grid-No.2 Supply Voltage . . .	200	200	200	200	volts
Grid-No.2 Series Resistor . . .	22000	22000	22000	22000	ohms
Grid-No.1 Voltage . . . . .	-19.5	-9.5	-6.5	-2	volts
Transconductance . . . . .	125	625	1250	12500	μmhos
RMS Grid-No.1 Voltage for cross-modulation factor = 0.01 . . . . .	450	160	100	-	mv

### Maximum Circuit Values:

Grid-No.1-Circuit Resistance . . . . .	1 max.	megohm
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<sup>a</sup> Without external shield.

