

# 6HS8

## Sharp-Cutoff Twin Pentode

### With Common Cathode, Grid No.1, & Grid No.2

#### 9-PIN MINIATURE TYPE

#### GENERAL DATA

#### Electrical:

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

Voltage (AC or DC) . . . . .	6.3 ± 0.6	volts
Current at heater volts = 6.3 . . . . .	0.300	amp
Peak heater-cathode voltage:		
Heater negative with respect to cathode . . . . .	200 max.	volts
Heater positive with respect to cathode . . . . .	200 <sup>a</sup> max.	volts

#### Direct Interelectrode Capacitances:<sup>b</sup>

Grid No.3 to plate (Each unit) . . . . .	2.0	pf
Grid No.1 to all other electrodes . . . . .	6.0	pf
Grid No.3 (Each unit) to all other electrodes . . . . .	3.6	pf
Plate (Each unit) to all other electrodes . . . . .	3.0	pf
Grid No.3 (Unit No.1) to grid No.3 (Unit No.2) . . . . .	0.015 max.	pf

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

*With one unit operating and plate and grid No.3 of other unit connected to ground*

Plate Voltage . . . . .	100	100	volts
Grid-No.3 Voltage . . . . .	0	0	volts
Grid-No.2 Voltage . . . . .	67.5	67.5	volts
Grid-No.1 Voltage . . . . .	0	<sup>c</sup>	volts
Grid-No.3-to-Plate Transconductance . . . . .	-	450	μmhos
Grid-No.1-to-Plate Transconductance . . . . .	1100	-	μmhos
Plate Current . . . . .	-	2	ma
Grid-No.3 Voltage (Approx.) for plate μa = 100. . . . .	-	-3.5	volts ←
Grid-No.1 Voltage (Approx.) for plate μa = 100. . . . .	-	-2.3	volts

*With both units operating*

Plate Voltage (Each unit) . . . . .	100	100	volts
Grid-No.3 Voltage (Each unit) . . . . .	-10	0	volts
Grid-No.2 Voltage . . . . .	67.5	67.5	volts
Grid-No.1 Voltage . . . . .	<sup>c</sup>	<sup>c</sup>	volts
Plate Current (Each unit) . . . . .	-	2	ma
Grid-No.2 Current . . . . .	7	4.4	ma
Cathode Current . . . . .	7.1	8.5	ma

← Indicates a change.

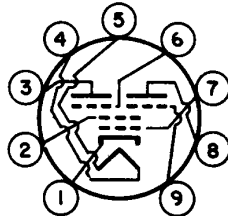


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## Mechanical:

Operating Position. . . . . Any  
 Type of Cathode . . . . . Coated Unipotential  
 Maximum Overall Length. . . . . 2-5/8"  
 Maximum Seated Length. . . . . 2-3/8"  
 Length, Base Seat to Bulb Top (Excluding tip) . . . 2" ± 3/32"  
 Diameter. . . . . 0.750" to 0.875"  
 Dimensional Outline . . . . . See *General Section*  
 Bulb. . . . . T6-1/2  
 Base. . . . . Small-Button Noval 9-Pin (JEDEC No.E9-1)  
 → Basing Designation for BOTTOM VIEW, . . . . . 9FG

Pin 1 - Cathode  
 Pin 2 - Grid No.2,  
           Internal  
           Shield  
 Pin 3 - Plate of  
           Unit No.2  
 Pin 4 - Heater  
 Pin 5 - Heater



Pin 6 - Grid No.3 of  
           Unit No.2  
 Pin 7 - Grid No.1  
 Pin 8 - Plate of  
           Unit No.1  
 Pin 9 - Grid No.3 of  
           Unit No.1

## AMPLIFIER — Class A<sub>1</sub>

### Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE (Each unit) . . . . .	300 max.	volts
GRID-No.3 (SUPPRESSOR-GRID) VOLTAGE (Each unit):		
Peak positive value . . . . .	50 max.	volts
DC negative value . . . . .	50 max.	volts
DC positive value . . . . .	3 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE . . . . .	150 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Negative-bias value . . . . .	50 max.	volts
CATHODE CURRENT . . . . .	12 max.	ma
GRID-No.2 INPUT . . . . .	0.75 max.	watt
PLATE DISSIPATION (Each unit) . . . . .	1.1 max.	watts

### Maximum Circuit Values:

Grid-No.3-Circuit Resistance (Each unit).	0.5 max.	megohm
Grid-No.1-Circuit Resistance. . . . .	0.5 max.	megohm

<sup>a</sup> The dc component must not exceed 100 volts.

<sup>b</sup> without external shield.

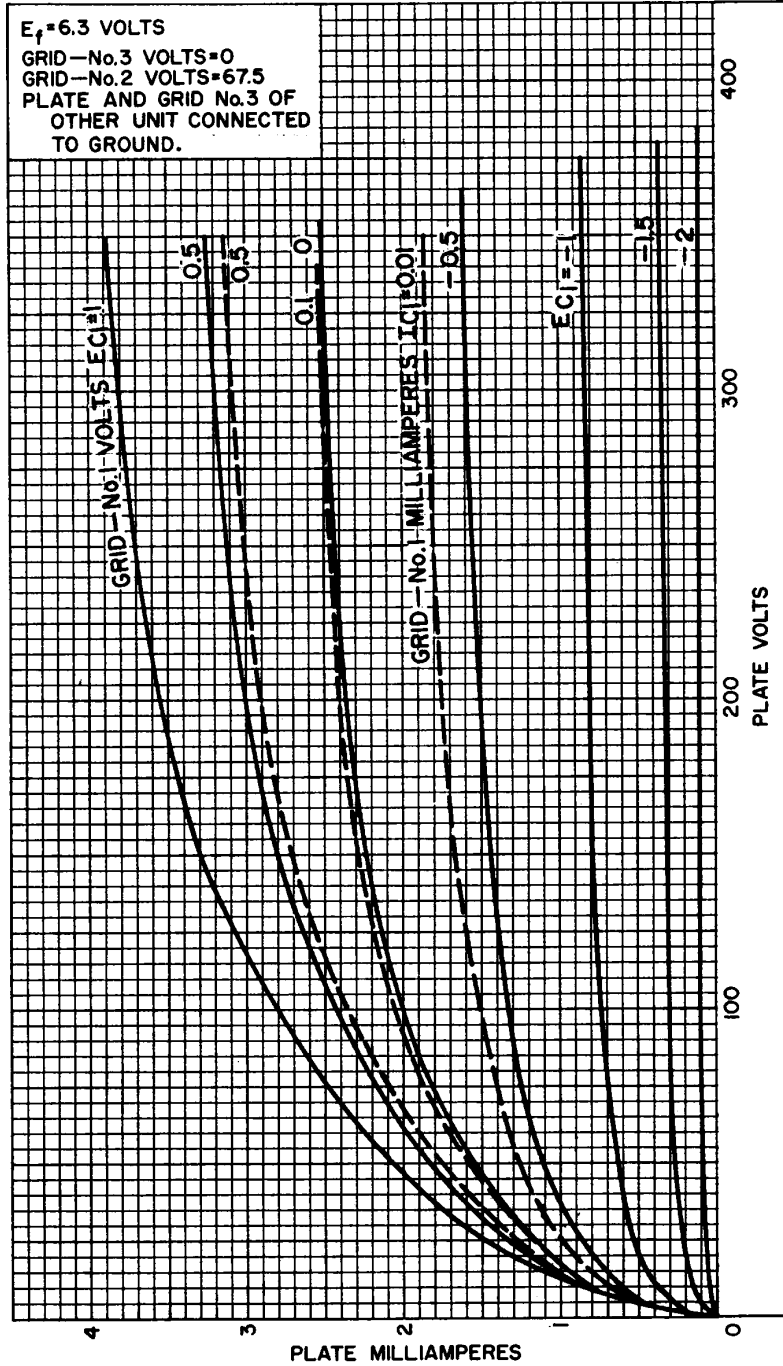
<sup>c</sup> Adjusted to give a dc grid-No.1 current of 100 microamperes.

→ Indicates a change.



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## AVERAGE PLATE CHARACTERISTICS Each Unit



92CM-11099

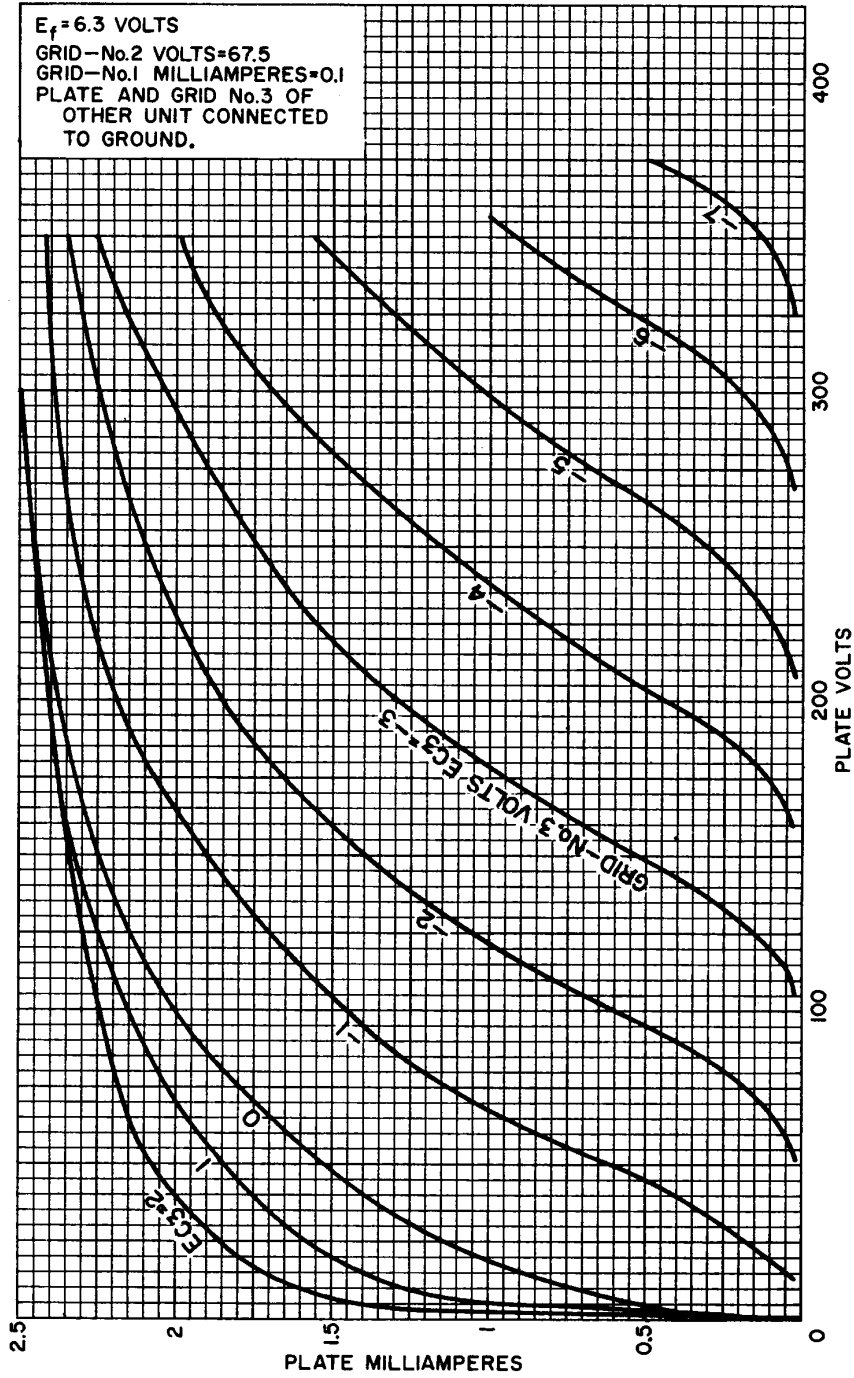


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DATA 2  
1-62

# 6HS8

## AVERAGE PLATE CHARACTERISTICS Each Unit



92CM-11102

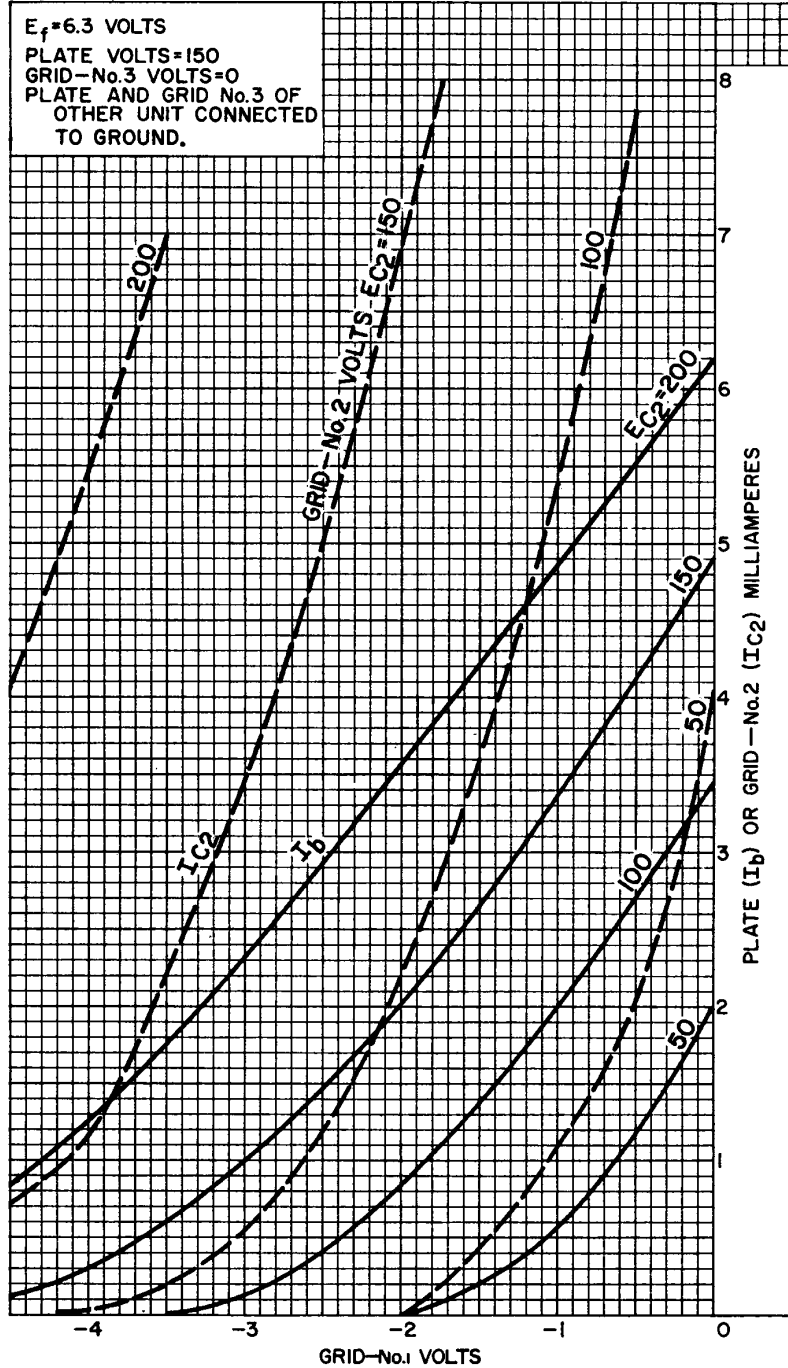
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## AVERAGE CHARACTERISTICS Each Unit



92CM-11104

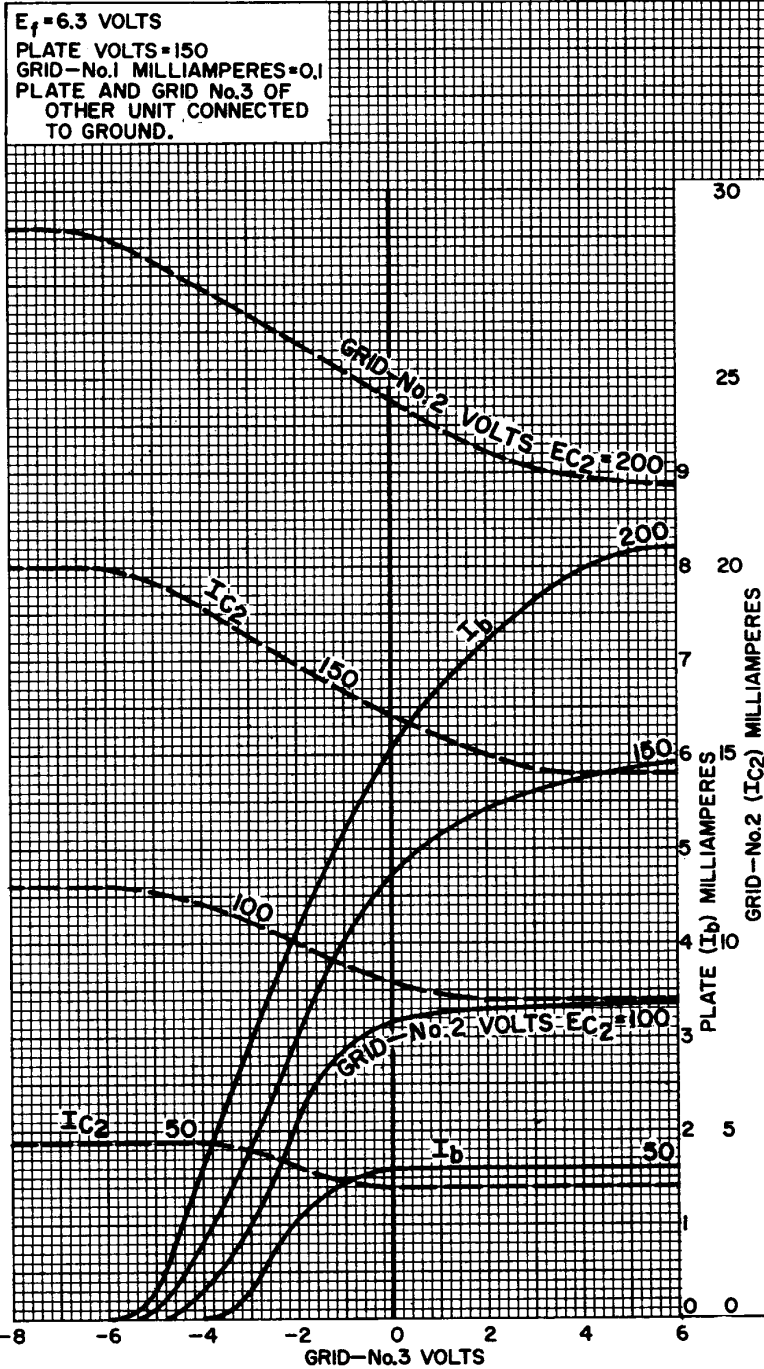


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DATA 3  
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## AVERAGE CHARACTERISTICS Each Unit



92CM-11105

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