

# 6AN8-A

## Medium-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

### GENERAL DATA

#### Electrical:

Heater, for Unipotential Cathodes:

Voltage (AC or DC) . . . . .	6.3	volts
Current . . . . .	0.45 ± 6%	amp
Warm-up time (Average) . . . . .	11	sec

Direct Interelectrode Capacitances:▲

#### Triode Unit:

Grid to plate . . . . .	1.5	μf
Grid to cathode and heater . . . . .	2	μf
Plate to cathode and heater . . . . .	0.26	μf

#### Pentode Unit:

Grid No.1 to plate . . . . .	0.04 max.	μf
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater . . . . .	7	μf
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater . . . . .	2.4	μf
Triode grid to pentode plate . . . . .	0.02 max.	μf
Pentode grid No.1 to triode plate . . . . .	0.02 max.	μf
Pentode plate to triode plate . . . . .	0.15 max.	μf

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

	Triode Unit	Pentode Unit	
Plate Supply Voltage . . . . .	150	125	volts
Grid-No.2 Supply Voltage . . . . .	-	125	volts
Grid-No.1 Supply Voltage . . . . .	-3	0	volts
Cathode Resistor . . . . .	0	56	ohms
Amplification Factor . . . . .	21	-	
Plate Resistance (Approx.) . . . . .	4700	170000	ohms
Transconductance . . . . .	4500	7800	μmhos
Plate Current . . . . .	15	12	ma
Grid-No.2 Current . . . . .	-	3.8	ma
Grid-No.1 Voltage (Approx.) for plate μa = 20 . . . . .	-17	-6	volts
Grid-No.1 Voltage (Approx.) for plate ma = 1.6, and cathode resistor (ohms) = 0 . . . . .	-	-3	volts

#### Mechanical:

Operating Position . . . . .	Any
Maximum Overall Length . . . . .	2-3/16"
Maximum Seated Length . . . . .	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip) . . . . .	1-9/16" ± 3/32"



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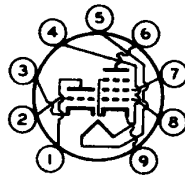
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Diameter . . . . . 0.750" to 0.875"  
 Dimensional Outline . . . . . See *General Section*  
 Bulb . . . . . T6-1/2  
 Base . . . . . Small-Button Noval 9-Pin (JEDEC No. E9-1)  
 Basing Designation for BOTTOM VIEW . . . . . 9DA

Pin 1 - Triode Plate  
 Pin 2 - Triode Grid  
 Pin 3 - Triode Cathode  
 Pin 4 - Heater  
 Pin 5 - Heater  
 Pin 6 - Pentode Plate  
 Pin 7 - Pentode Grid No.2



Pin 8 - Pentode Grid No.1  
 Pin 9 - Pentode Grid No.3, Pentode Cathode, Internal Shield

## AMPLIFIER — Class A<sub>1</sub>

### Maximum Ratings, Design-Maximum Values:

	<i>Triode Unit</i>	<i>Pentode Unit</i>	
PLATE VOLTAGE . . . . .	330 max.	330 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE . . . . .	-	330 max.	volts
GRID-No.2 VOLTAGE . . . . .	-	See <i>Grid-No.2 Input</i>	
<i>Rating Chart at front of Receiving Tube Section</i>			
GRID-No.1 (CONTROL-GRID) VOLTAGE:			
Positive-bias value . . . . .	0 max.	0 max.	volts
GRID-No.2 INPUT:			
For grid-No.2 voltages up to 165 volts . . . . .	-	0.55 max.	watt
For grid-No.2 voltages between 165 and 330 volts . . . . .	-	See <i>Grid-No.2 Input</i>	
<i>Rating Chart at front of Receiving Tube Section</i>			
PLATE DISSIPATION . . . . .	2.8 max.	2.3 max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode . . . . .	200 max.	200 max.	volts
Heater positive with respect to cathode . . . . .	200 <sup>●</sup> max.	200 <sup>●</sup> max.	volts

### Maximum Circuit Values:

	<i>Triode Unit</i>	<i>Pentode Unit</i>	
Grid-No.1-Circuit Resistance: <sup>★</sup>			
For fixed-bias operation . . . . .	0.5 max.	0.25 max.	megohm
For cathode-bias operation . . . . .	1 max.	1 max.	megohm

▲ Without external shield.

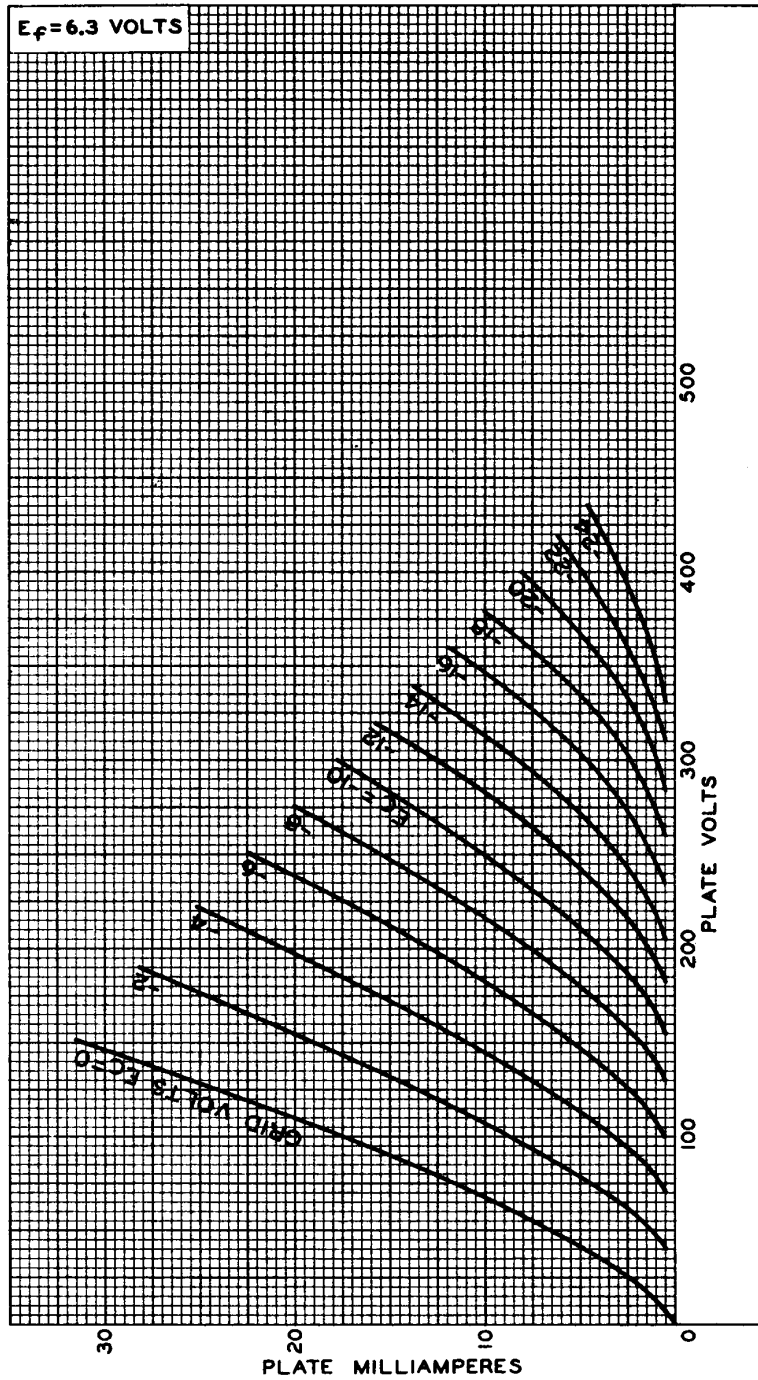
● The dc component must not exceed 100 volts.

★ If either unit is operated at maximum-rated conditions, grid-No.1-circuit resistances for both units should not exceed the stated values.



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## AVERAGE PLATE CHARACTERISTICS Triode Unit



92CM-8209

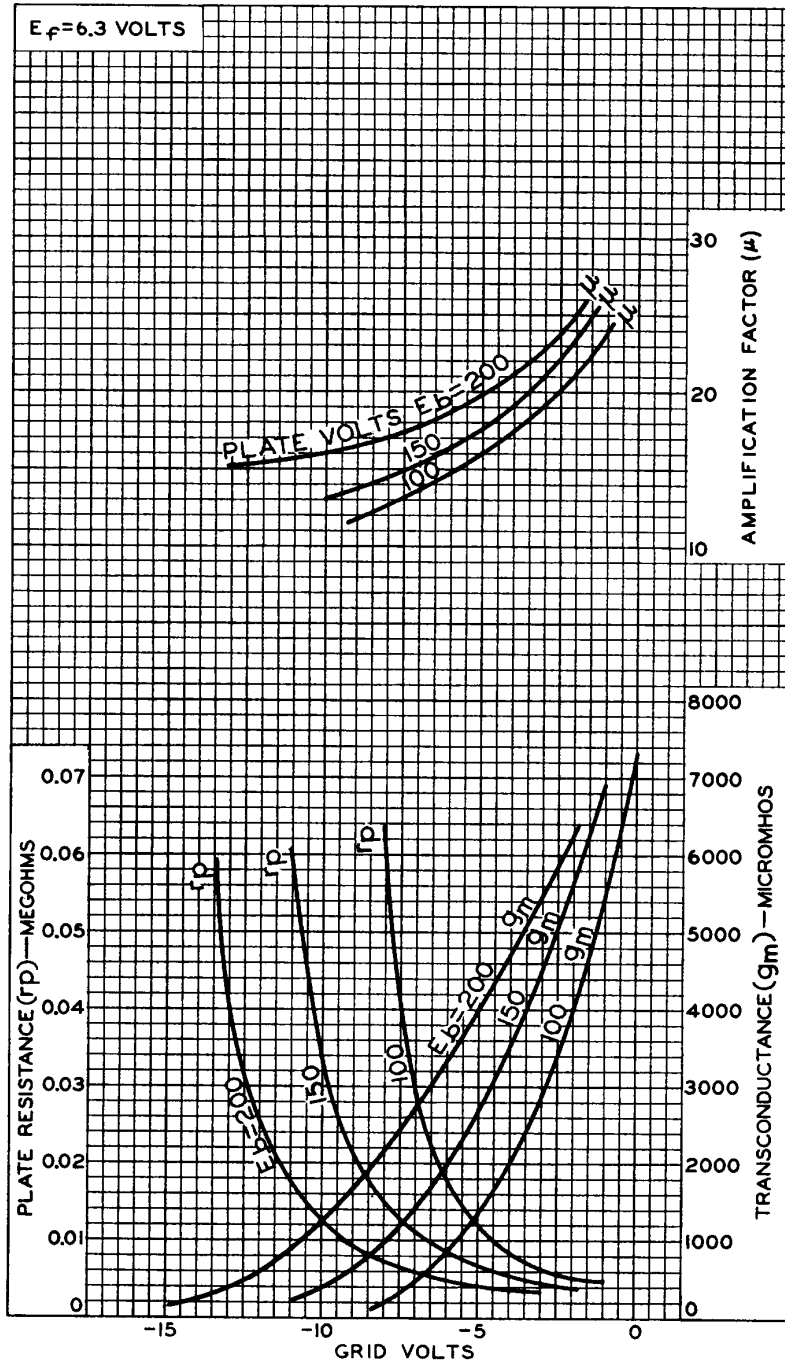


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## AVERAGE CHARACTERISTICS Triode Unit



92CM-8207R1

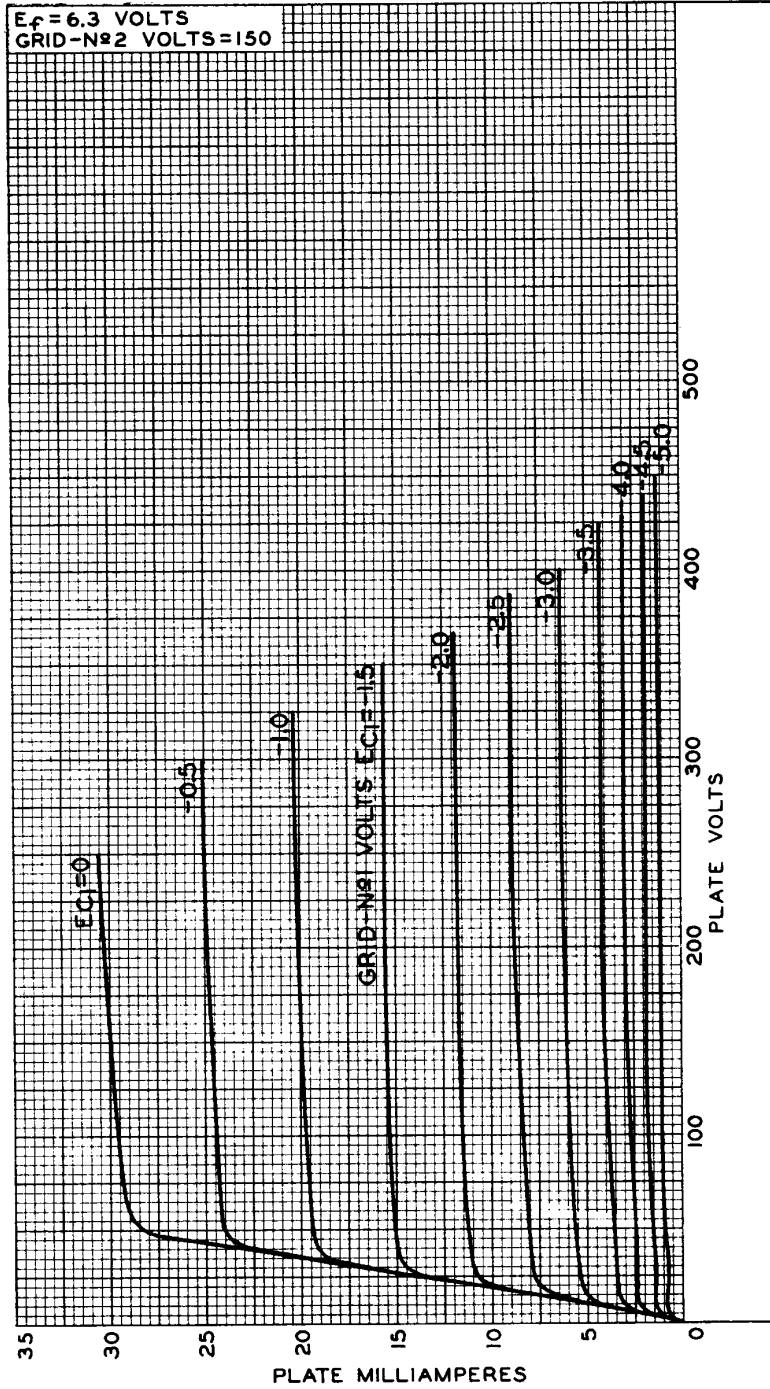
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## AVERAGE PLATE CHARACTERISTICS Pentode Unit



92CM-8206

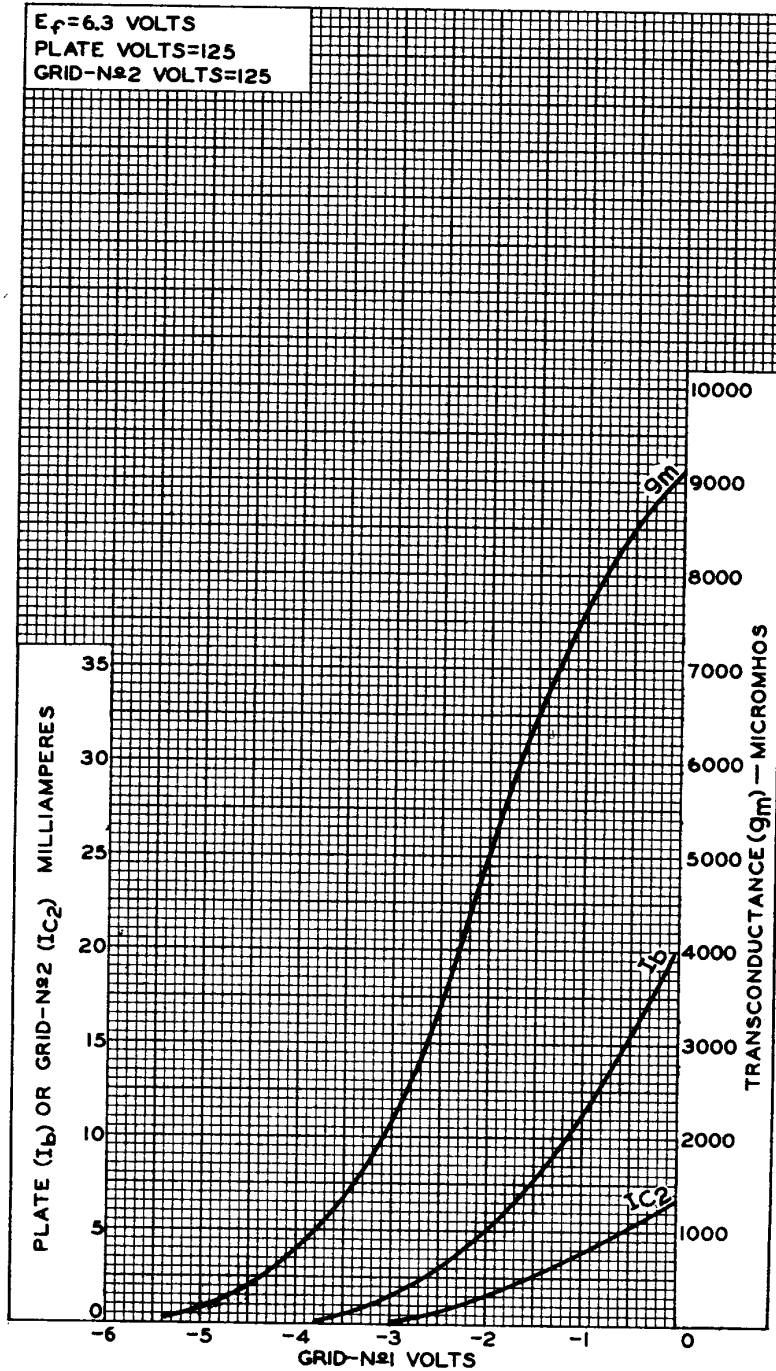


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## AVERAGE CHARACTERISTICS Pentode Unit



92CM-8208RI

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