



12AL8

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MEDIUM-MU TRIODE-POWER TETRODE

9-PIN MINIATURE TYPE

For use in automobile radio receivers operating directly from 12-volt storage batteries

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage. 10 to 15.9 ac or dc volts

This voltage is on an absolute basis. For longest life, it is recommended that the heater be operated within the voltage range of 11 to 14 volts.

Current (Approx.) at

12.6 volts 0.55 amp

Direct Interelectrode Capacitances:⁰

Triode Unit:

Grid to plate. 5.7 $\mu\mu\text{f}$

Grid to cathode and heater 1.8 $\mu\mu\text{f}$

Plate to cathode and heater. 0.4 $\mu\mu\text{f}$

Tetrode Unit:

Grid No.2 to plate 14 $\mu\mu\text{f}$

Grid No.2 to cathode, grid No.1,
and heater 13 $\mu\mu\text{f}$

Plate to cathode, grid No.1,
and heater 1.6 $\mu\mu\text{f}$

Tetrode grid No.2 to triode grid 0.01 max. $\mu\mu\text{f}$

Characteristics, Class A₁ Amplifier:

	Triode Unit	Tetrode Unit	
Heater Voltage	12.6	12.6	volts
Plate Voltage.	12.6	12.6	volts
Control-Grid Voltage (Developed across 2.2-megohm resistor):			
Grid	-0.9	-	volt
Grid-No.2.	-	-0.5	volt
Grid-No.1 (Space-Charge- Grid) Voltage.	-	12.6	volts
Amplification Factor:			
Grid to plate.	13	-	
Grid No.2 to plate	-	7.2	
Plate Resistance (Approx.)	13000	480	ohms
Transconductance:			
Grid to plate.	1000	-	μmhos
Grid No.2 to plate	-	15000	μmhos
Plate Current.	0.5	40	ma
Grid-No.1 Current.	-	75	ma

Mechanical:

Operating Position Any

Maximum Overall Length 2-5/8"

Maximum Seated Length. 2-3/8"

⁰: See next page.

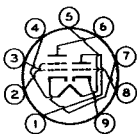


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Length, Base Seat to Bulb Top (Excluding tip) 2" \pm 3/32"
 Diameter 0.750" to 0.875"
 Dimensional Outline. See General Section
 Bulb T6-1/2
 Base Small-Button Noval 9-Pin (JEDEC No. E9-1)
 Basing Designation for BOTTOM VIEW 9GS

Pin 1 - Triode Plate
 Pin 2 - Tetrode
 Grid No.2
 Pin 3 - Tetrode
 Grid No.1
 Pin 4 - Heater
 Pin 5 - Heater



Pin 6 - Tetrode Plate
 Pin 7 - Tetrode
 Cathode
 Pin 8 - Triode Grid
 Pin 9 - Triode
 Cathode

AMPLIFIER — Class A₁

Maximum Ratings, Design-Center Values:

	Triode Unit	Tetrode Unit	
PLATE VOLTAGE.	30 max.	30 max.	volts
GRID-No.2 (CONTROL-GRID) VOLTAGE.	-	-20 max.	volts
GRID-No.1 (SPACE-CHARGE-GRID) VOLTAGE (Absolute maximum)	-	16 max.	volts
CATHODE CURRENT.	20 max.	-	ma
PEAK-HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	30 max.	30 max.	volts
Heater positive with respect to cathode	30 max.	30 max.	volts

Maximum Circuit Values:

	Triode Unit	Tetrode Unit	
Grid-No.2-Circuit Resistance	-	10 max.	megohms
Grid-Circuit Resistance.	10 max.	-	megohms

o without external shield.

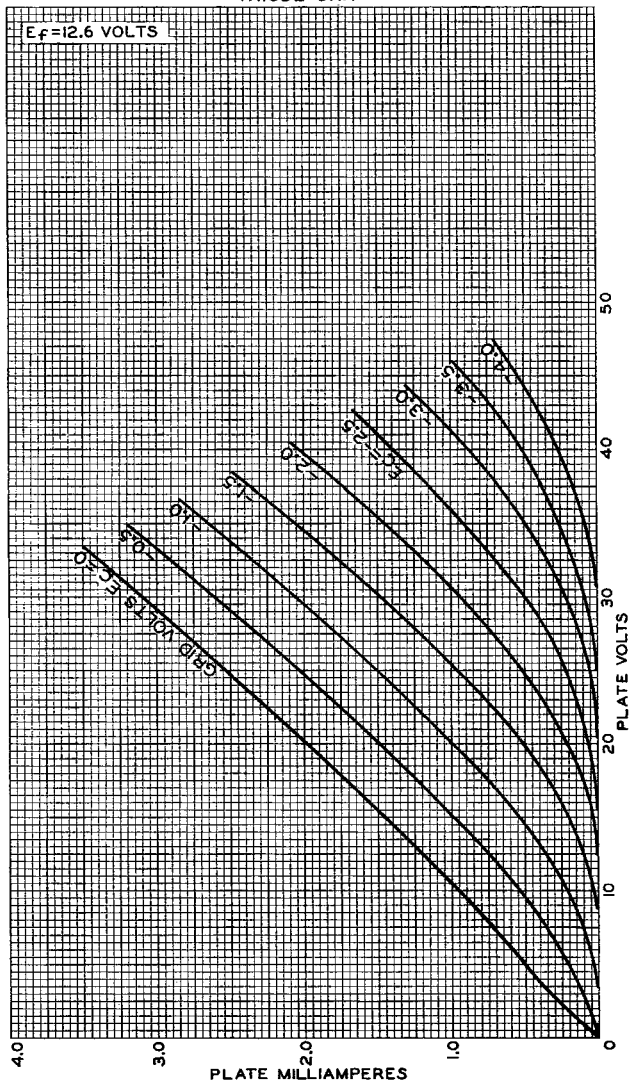
• under no circumstances should this absolute value be exceeded.



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AVERAGE PLATE CHARACTERISTICS
TRIODE UNIT

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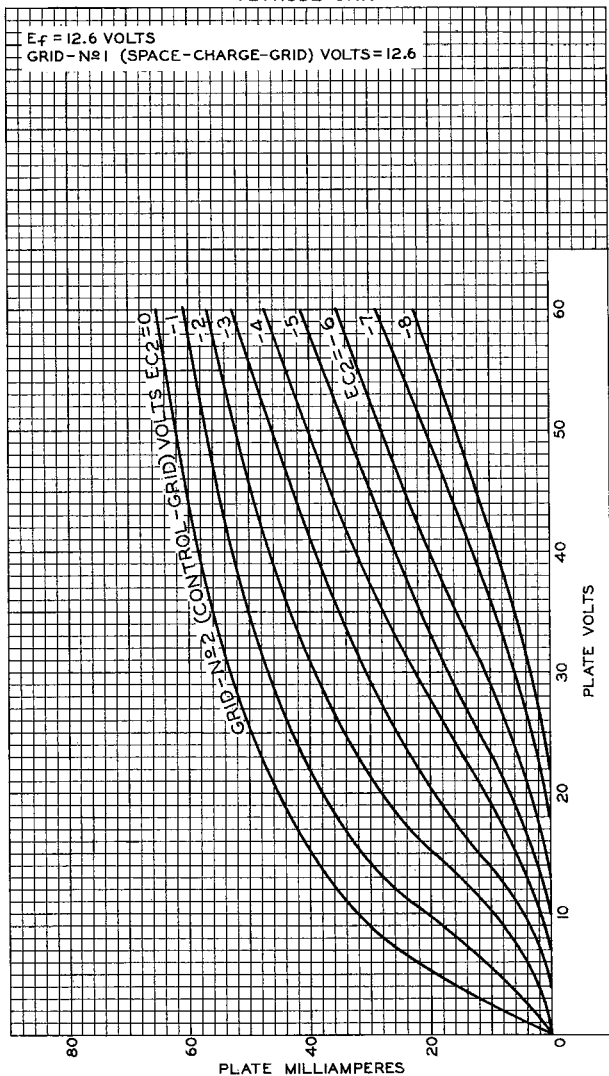


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AVERAGE PLATE CHARACTERISTICS TETRODE UNIT



ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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AVERAGE PLATE CHARACTERISTICS
TETRODE UNIT

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$E_f = 12.6$ VOLTS

GRID-NO 2 (CONTROL-GRID) VOLTS = 0

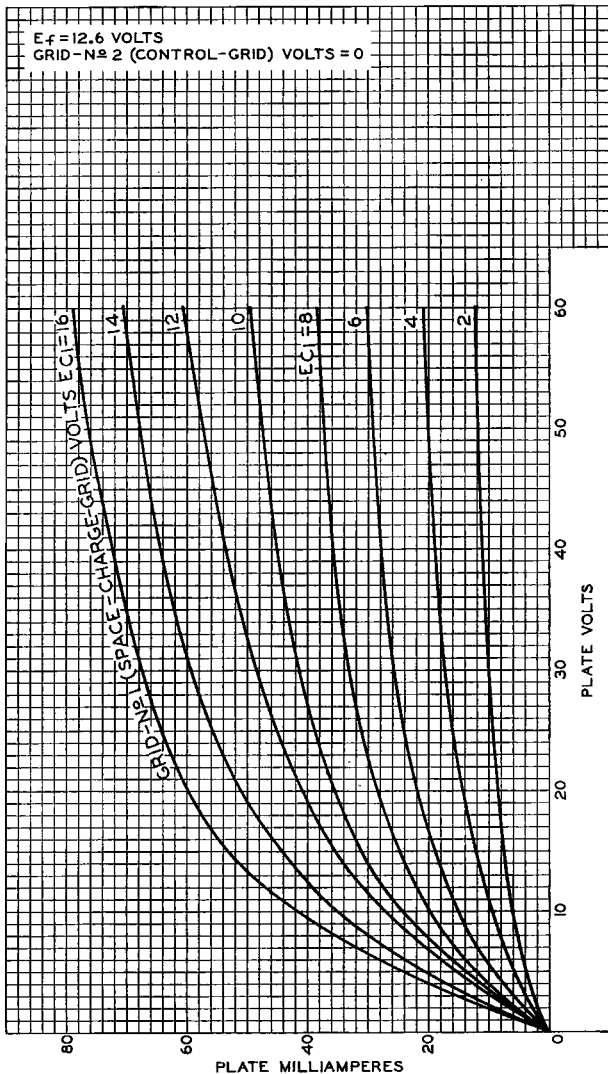


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