



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 15.9ac 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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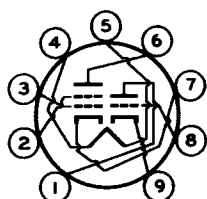


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MEDIUM-MU TRIODE-POWER TETRODE

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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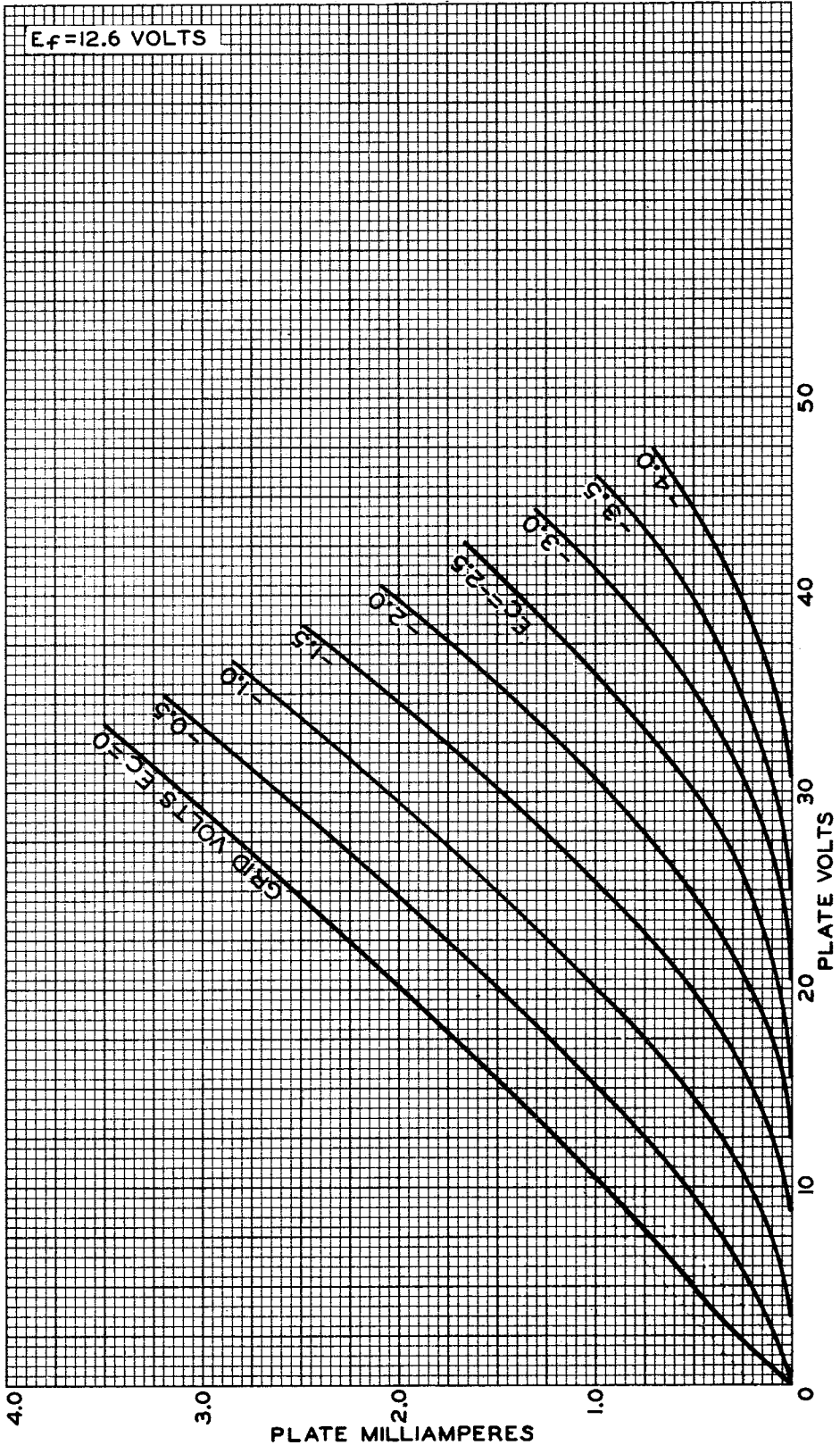


PLATE MILLIAMPERES

PLATE VOLTS

ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-9432

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AVERAGE PLATE CHARACTERISTICS TETRODE UNIT

$E_f = 12.6$ VOLTS

GRID - No 1 (SPACE-CHARGE-GRID) VOLTS = 12.6

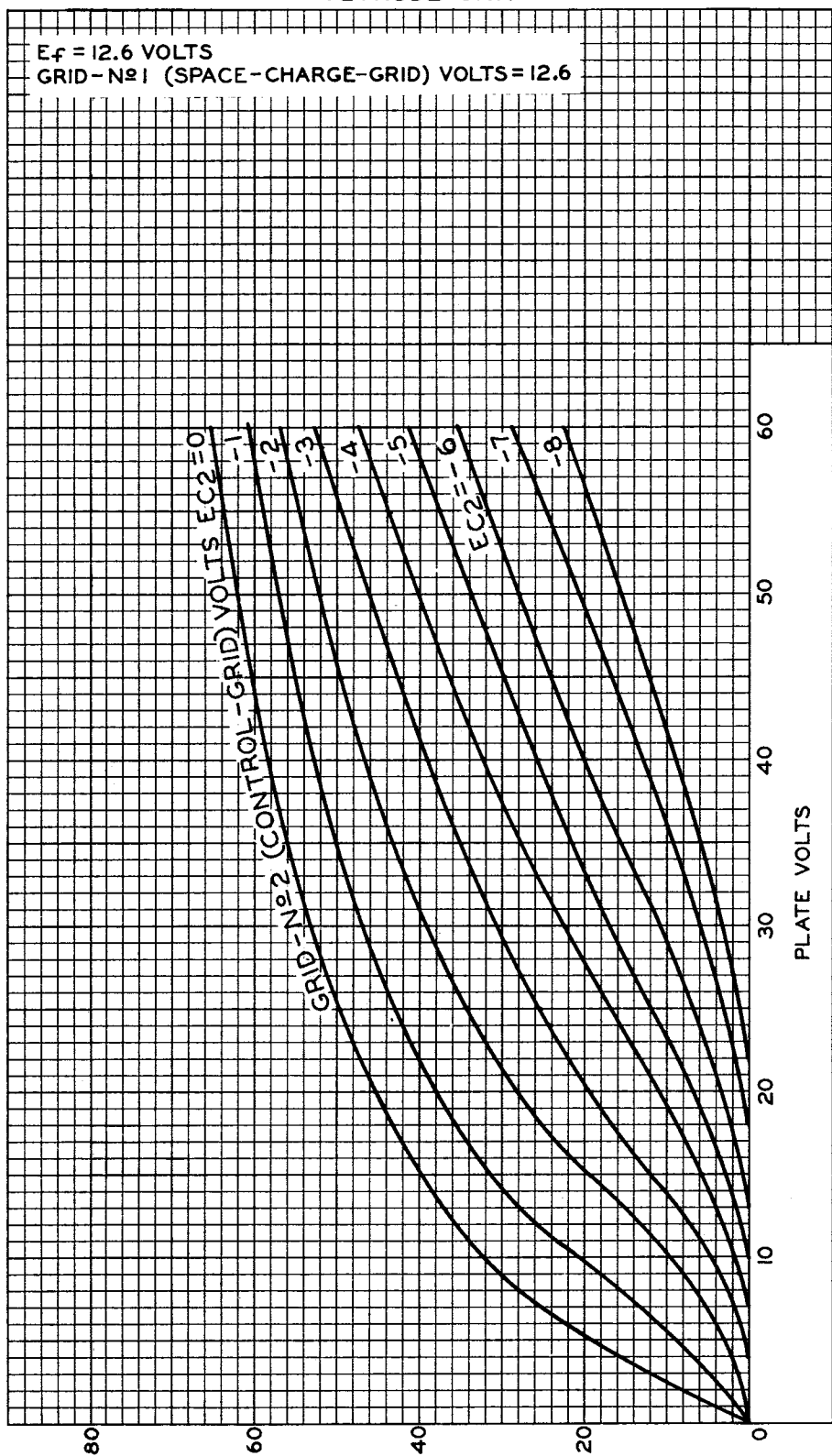


PLATE MILLIAMPERES

ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-9422



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AVERAGE PLATE CHARACTERISTICS TETRODE UNIT

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$E_f = 12.6$ VOLTS
GRID-№ 2 (CONTROL-GRID) VOLTS = 0

