

# 12AE7

## Dual Triode

### With Medium-Mu Unit and Low-Mu Unit

#### 9-PIN MINIATURE TYPE

For Automobile Radio Receivers Operating  
Directly from 6-Cell Storage Batteries

#### GENERAL DATA

#### Electrical:

Heater, for Unipotential Cathodes:

Voltage range (DC) . . . . . 10 to 15.9 volts

*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 . . . . . 0.45 amp

Direct Interelectrode Capacitances (Approx.):

	Unit No. 1	Unit No. 2	
Grid to plate . . . . .	3.9	3.4	$\mu\mu\text{f}$
Grid to cathode and heater. . .	4.7	4.2	$\mu\mu\text{f}$
Plate to cathode and heater . .	0.75	0.85	$\mu\mu\text{f}$

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

*With heater voltage of 12.6 volts*

	Unit No. 1	Unit No. 2	
Plate Voltage . . . . .	12.6	12.6	volts
Grid Resistor . . . . .	1.5	1	megohms
Amplification Factor. . . . .	13	6.4	
Plate Resistance (Approx.). . . .	3150	985	ohms
Transconductance. . . . .	4000	6500	$\mu\text{mhos}$
Plate Current . . . . .	1.9	7.5	ma

#### 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"  $\pm$  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. . . . . 9A

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|-----------------------------------|--|-----------------------------------|
| Pin 1 - Plate of Unit No. 2       |  | Pins 5 & 9 - Heater of Unit No. 1 |
| Pin 2 - Grid of Unit No. 2        |  | Pin 6 - Plate of Unit No. 1       |
| Pin 3 - Cathode of Unit No. 2     |  | Pin 7 - Grid of Unit No. 1        |
| Pins 4 & 9 - Heater of Unit No. 2 |  | Pin 8 - Cathode of Unit No. 1     |
|                                   |  | Pin 9 - Heater Tap                |



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## AUDIO DRIVER

*Values are for Each Unit*

**Maximum Ratings, Design-Center Values:**

PLATE VOLTAGE . . . . .	16 max.	volts
GRID VOLTAGE:		
Positive-bias value . . . . .	0 max.	volts
PLATE DISSIPATION . . . . .	1 max.	watt
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode .	16 max.	volts
Heater positive with respect to cathode .	16 max.	volts

**Maximum Circuit Values:**

Grid-Circuit Resistance . . . . .	1.5 max.	megohms
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