

PHILCO

RECEIVING TUBE

DATA SHEET

TENTATIVE

12AE7

DISSIMILAR

DUO-TRIODE TUBE

DESCRIPTION

Type 12AE7 is a jumbo miniature low- μ dissimilar double triode intended for use as a driver tube for the audio output stage of hybrid automobile radios. Both heater and plate are designed for 12 volt operation.

MECHANICAL DATA

Cathode	Coated Unipotential
Outline Drawing	6-2
Bulb	T6 $\frac{1}{2}$
Base	E9-1 Small Button 9-pin
Maximum Diameter	$\frac{7}{8}$ inch
Maximum Overall Length	2 $\frac{3}{16}$ inches
Maximum Seated Height	1 $\frac{15}{16}$ inches
Basing	9A

1—#2 Plate	6—#1 Plate
2—#2 Grid	7—#1 Grid
3—#2 Cathode	8—#1 Cathode
4—Heater	9—Heater Center Tap
5—Heater	

Mounting Position Any

ELECTRICAL DATA

Direct Interelectrode Capacitance (without shield)

Grid to Plate (Triode 1)	3.9 μ f
Grid to Plate (Triode 2)	3.4 μ f
Input (Triode 1)	4.7 μ f
Input (Triode 2)	4.2 μ f
Output (Triode 1)	0.75 μ f
Output (Triode 2)	0.85 μ f

Heater Characteristics

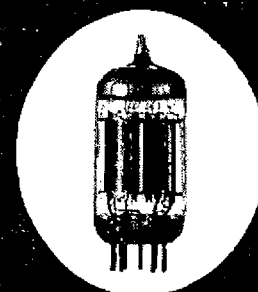
Heater Voltage	12.6 volts
Heater Current	0.45 amp ($\pm 10\%$)
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	16.0 volts
Heater Positive with Respect to Cathode	16.0 volts

Maximum Ratings (Design-Center Rating System) (Note 1)

Plate Voltage	16.0 volts
Positive DC Grid Voltage	0 volts
Plate Dissipation	1.0 watt
Grid Circuit Resistance	1.5 megohms

Typical Operating Conditions and Characteristics

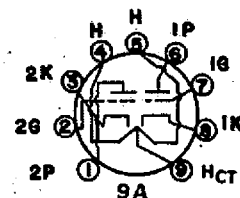
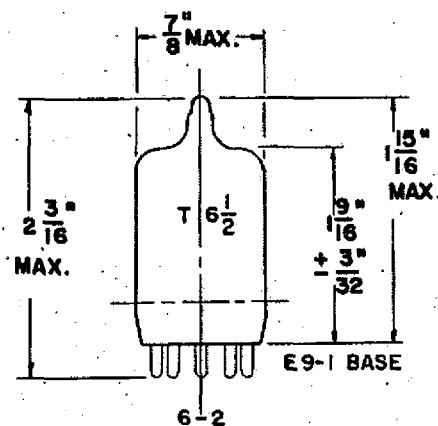
Plate Voltage (each triode)	12.6 volts
Grid Leak Resistor	
Triode 1	1.5 megohms
Triode 2	1.0 megohm



GENERAL DESCRIPTION

Jumbo miniature dissimilar duo-triode for hybrid auto radio driver applications.

DIMENSIONAL OUTLINE AND MECHANICAL SPECIFICATIONS



BASING DIAGRAM
Bottom View of Base

(Over)

Plate Current	
Triode 1	1.9 ma
Triode 2	7.5 ma
Transconductance	
Triode 1	4000 μ mhos
Triode 2	6500 μ mhos
Amplification Factor	
Triode 1	13.0
Triode 2	6.4
Plate Resistance	
Triode 1	3150 ohms
Triode 2	985 ohms

NOTE

1. Ratings apply to each section unless otherwise stated.