

Twin Diode—Power Tetrode

9-PIN MINIATURE TYPE

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

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

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 0.25 amp

Direct Interelectrode Capacitances:▲

Tetrode Unit:

Grid No.1 to plate. 0.6 μf

Grid No.1 to cathode, grid No.2,
and heater. 11 μf

Plate to cathode, grid No.2,
and heater. 3.6 μf

Tetrode grid No.1 to diode-No.1
plate 0.22 max. μf

Tetrode grid No.1 to diode-No.2
plate 0.12 max. μf

Characteristics, Class A₁ Amplifier (Tetrode Unit):

Heater Voltage. 12.6 volts

Plate Voltage 12.6 volts

Grid-No.2 Voltage 12.6 volts

Grid-No.1 Resistor (Bypassed) 2.2 megohms

Plate Resistance (Approx.). 6000 ohms

Transconductance. 6200 μmhos

Plate Current 12 ma

Grid-No.2 Current 1.5 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. 9JX

Pin 1—Tetrode
Grid No.1

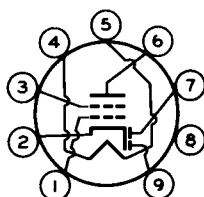
Pin 2—Cathode

Pin 3—Tetrode
Grid No.2

Pin 4—Heater

Pin 5—Heater

Pin 6—Tetrode Plate



Pin 7—Diode-No.2
Plate

Pin 8—Internal Con-
nection—
Do Not Use

Pin 9—Diode-No.1
Plate



12DU7

TETRODE UNIT — AUDIO DRIVER

Maximum Ratings, *Design-Maximum Values:*

PLATE VOLTAGE	16 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	16 max.	volts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	16 max.	volts
Heater positive with respect to cathode.	16 max.	volts

Typical Operation:

Heater Voltage.	12.6	volts
Plate Voltage	12.6	volts
Grid-No.2 Voltage	12.6	volts
Grid-No.1 Voltage	<i>Obtained by rectification through 2.2-megohm grid-No.1 resistor</i>	
Peak AF Grid-No.1 Voltage	2.2	volts
Load Resistance	2700	ohms
Total Harmonic Distortion	10	%
Max.-Signal Power Output.	25	mw

Maximum Circuit Values:

Grid-No.1-Circuit Resistance.	10 max.	megohms
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DIODE UNITS — Two

Values are for Each Unit

Maximum Ratings, *Design-Maximum Values:*

PLATE CURRENT	1 max.	ma
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Characteristics, Instantaneous Test Condition:

Heater Voltage.	12.6	volts
Plate Current for plate volts = 10. . .	1.3	ma

▲ Without external shield.

