



12DV8

TWIN DIODE-POWER TETRODE

9-PIN MINIATURE TYPE

*For use in automobile radio receivers operating directly
from 6-cell storage-battery systems*

12DV8

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage range (DC).	10 to 15.9	volts
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*This voltage range is on an absolute basis. For longest
life, it is recommended that the heater be operated with-
in the voltage range of 11 to 14 volts.*

Current (Approx.) at 12.6 volts . . .	0.375	amp
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Direct Interelectrode Capacitances:⁰

Tetrode Unit:

Grid No.2 to plate.	12	μf
Grid No.2 to cathode, grid No.1, and heater.	9	μf
Plate to cathode, grid No.1, and heater.	1	μf

Diode Units:

Plate of unit No.1 to cathode & internal shield, and heater . . .	1.7	μf
Plate of unit No.2 to cathode & internal shield, and heater . . .	1.6	μf
Plate of unit No.1 to plate of unit No.2	0.1 max.	μf
Tetrode grid No.2 to either diode plate	0.015 max.	μf

Characteristics, Class A₁ Amplifier (Tetrode Unit):

Heater Voltage.	12.6	volts
Plate Supply Voltage.	12.6	volts
Grid-No.2 (Control-grid) Resistor . . .	4.7	megohms
Grid-No.1 (Space-charge-grid) Supply Voltage.	12.6	volts
Cathode Resistor.	18	ohms
Plate Resistance (Approx.).	900	ohms
Amplification Factor, Grid No.2 to Plate.	7.6	
Transconductance, Grid No.2 to Plate. .	8500	μmhos
Plate Current	9	ma
Grid-No.1 Current	53	ma

Mechanical:

Operating Position.	Any
Maximum Overall Length.	2-5/8"
Maximum Seated Length	2-3/8"
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

⁰ Without external shield.

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Base. Small-Button Noval 9-Pin (JEDEC No.E9-1)

Basing Designation for BOTTOM VIEW. 9HR

Pin 1 - Plate of Diode
Unit No.2

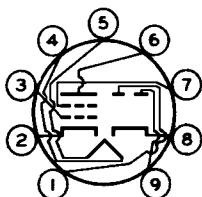
Pin 2 - Cathode of
Tetrode Unit

Pin 3 - Grid No.1 of
Tetrode Unit

Pin 4 - Heater

Pin 5 - Heater

Pin 6 - Plate of
Tetrode Unit



Pin 7 - Grid No.2 of
Tetrode Unit

Pin 8 - Cathode of
Diode Units
No.1 & No.2,
Internal
Shield

Pin 9 - Plate of Diode
Unit No.1

TETRODE UNIT — AUDIO DRIVER

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE	16 max.	volts
GRID-No.2 (CONTROL-GRID) VOLTAGE:		
Negative-bias value	16 max.	volts
GRID-No.1 (SPACE-CHARGE-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 Supply Voltage.	12.6	volts
Grid-No.1 Supply Voltage.	12.6	volts
Grid-No.2 Resistor.	4.7	megohms
Cathode Resistor.	18	ohms
Peak AF Grid-No.2 Supply Voltage		
(Approx.):		
From 0.3-megohm signal source	1.2	volts
Indicated-Signal Plate Current.	6.8	ma
Grid-No.1 Current	54	ma
Load Resistance	1250	ohms
Total Harmonic Distortion	3	%
Indicated-Signal Power Output	5	mw

Maximum Circuit Values:

Grid-No.2-Circuit Resistance.	10 max.	megohms
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DIODE UNITS — Two

Values are for Each Unit

Maximum Ratings, Design-Maximum Values:

PLATE CURRENT	5 max.	ma
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PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode.	16 max.	volts
Heater positive with respect to cathode.	16 max.	volts

Characteristics:

Heater Voltage.	12.6	volts
Plate Current for plate volts = 10. . .	3	ma