



12J8

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TWIN DIODE—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 range. 10 to 15.9 dc volts

*This voltage range 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 0.325 amp

Direct Interelectrode Capacitances:^o**Tetrode Unit:**Grid No.1 to plate 0.7 $\mu\mu\text{f}$ Grid No.1 to cathode, grid No.2, and
heater 10.5 $\mu\mu\text{f}$ Plate to cathode, grid No.2, and
heater 4.4 $\mu\mu\text{f}$ Tetrode grid No.1 to plate of diode unit No.1. 0.04 max. $\mu\mu\text{f}$ Tetrode grid No.1 to plate of diode unit No.2. 0.015 max. $\mu\mu\text{f}$ **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 9GC

Pin 1—Grid No.1 of
Tetrode UnitPin 2—Cathode of
Tetrode UnitPin 3—Grid No.2 of
Tetrode Unit

Pin 4—Heater

Pin 5—Heater

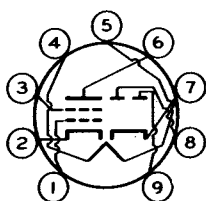
Pin 6—Plate of
Tetrode UnitPin 7—Cathode of
Diode Units
No.1 & No.2Pin 8—Plate of Diode
Unit No.2Pin 9—Plate of Diode
Unit No.1**TETRODE UNIT — AUDIO DRIVER****Maximum Ratings, Design-Center Values:**

PLATE VOLTAGE. 30 max. volts

GRID—No.2 (SCREEN—GRID) VOLTAGE. 30 max. volts

PEAK HEATER—CATHODE VOLTAGE:

Heater negative with respect to cathode. 30 max. volts

Heater positive with respect to cathode. 30 max. volts

^o Without external shield.

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Typical Operation with 12.6 Volts on Heater:

Plate Voltage.	12.6	volts
Grid-No.2 Voltage.	12.6	volts
Grid-No.1 (Control-Grid) Voltage	0	volts
AF Grid-No.1 Voltage (RMS)	1.6	volts
Grid-No.1 Resistor	2.2	megohms
Grid-No.1-Resistor Bypass Capacitor.	1	μ f
Zero-Signal Plate Current.	12	ma
Zero-Signal Grid-No.2 Current.	1.5	ma
Transconductance.	5500	μ mhos
Plate Resistance (Approx.)	6000	ohms
Load Resistance.	2700	ohms
Total Harmonic Distortion.	5	%
Max.-Signal Power Output	20	mw

Maximum Circuit Values:

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

Maximum Ratings, Design-Center Values:

Values are for Each Unit

PLATE CURRENT.	5 max.	ma
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode. .	30 max.	volts
Heater positive with respect to cathode. .	30 max.	volts

Characteristics with 12.6 Volts on Heater:

	Diode Unit No.1	Diode Unit No.2	
Plate Current for plate volts = 5. .	8.5	12	ma