

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 0.5 amp

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.).	4000	ohms
Transconductance.	5000	μmhos
Plate Current	6	ma
Grid-No.2 Current	1	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" ± 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. 9HZ

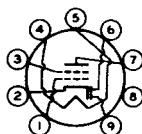
Pin 1—Tetrode
Grid No.1

Pin 2—Cathode

Pin 3—Tetrode
Grid No.2

Pin 4—Heater

Pin 5—Heater



Pin 6—Diode-No.2
Plate

Pin 7—Tetrode Plate

Pin 8—Internal Connection—
Do Not Use

Pin 9—Diode-No.1
Plate

TETRODE UNIT — AMPLIFIER — Class A₁

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE	30 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	30 max.	volts
PLATE CURRENT	10 max.	ma
PLATE DISSIPATION	0.5 max.	watt
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	30 max.	volts
Heater positive with respect to cathode.	30 max.	volts



12DK7

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 15-megohm grid-No.1 resistor</i>	
Peak AF Grid-No.1 Voltage from 0.2-megohm signal source	1.4	volts
Zero-Signal Plate Current	6	ma
Max.-Signal Plate Current	2.5	ma
Load Resistance	3500	ohms
Total Harmonic Distortion	10	%
Max.-Signal Power Output.	10	mw

Maximum Circuit Values:

Grid-No.1-Circuit Resistance.	15 max.	megohms
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DIODE UNITS — Two

Values are for Each Unit

Characteristics, Instantaneous Test Condition:

Heater Voltage.	12.6	volts
Plate Current for plate volts = 10.	1	ma

