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12EM6

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DIODE-POWER TETRODE

9-PIN MINIATURE TYPE

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

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage range (DC) 10 to 15.9 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 0.5 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 μ mhos

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" \pm 3/32"

Diameter 0.750" to 0.875"

Dimensional Outline See General Section

Bulb T6-1/2

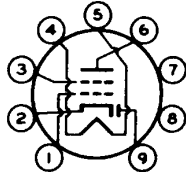
Base Small-Button Noval 9-Pin (JEDEC No. E9-1)

Basing Designation for BOTTOM VIEW 9HV

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 - Internal Con-

nection—
Do Not Use

Pin 8 - Same as Pin 7
Pin 9 - Diode Plate

TETRODE UNIT — AUDIO DRIVER

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE 30 max. volts

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

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

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DIODE-POWER TETRODE

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 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 UNIT

Maximum Ratings, Design-Center Values:

PLATE CURRENT	10 max.	ma
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Characteristics:

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