# Diode—Remote-Cutoff Pentode

## 9-PIN MINIATURE TYPE

### GENERAL DATA

**Electrical:**

Heater, for Unipotential Cathode:
- Voltage (AC or DC): \( 6.3 \pm 10\% \) volts
- Current at 6.3 volts: 0.3 amp

Direct Interelectrode Capacitances:
- Pentode Unit:
  - Grid No.1 to plate: 0.002 max. \( \mu\text{f} \)
  - Grid No.1 to cathode, grid No.3, grid No.2, internal shield, and heater: 5.5 \( \mu\text{f} \)
  - Plate to cathode, grid No.3, grid No.2, internal shield, and heater: 5 \( \mu\text{f} \)
  - Pentode grid No.1 to diode plate: 0.0015 max. \( \mu\text{f} \)
  - Pentode plate to diode plate: 0.095 \( \mu\text{f} \)

**Characteristics, Class A\(_1\) Amplifier (Pentode Unit):**

- Plate Voltage: 100 volts
- Grid No.3: Connected to cathode at socket
- Internal Shield: Connected to cathode at socket
- Grid-No.2 Voltage: 100 volts
- Grid-No.1 Supply Voltage: 0 volts
- Grid-No.1 Resistor (Bypassed): 2.2 megohms
- Plate Resistance (Approx.): 0.25 megohm
- Transconductance: 3800 \( \mu\text{hos} \)
- Plate Current: 9 ma
- Grid-No.2 Current: 3.5 ma
- Grid-No.1 Voltage (Approx.) for transconductance (\( \mu\text{hos} \)) = 40 ... −20 volts

**Mechanical:**

- Operating Position: Any
- Maximum Overall Length: 2−5/8" (2−3/8"
- 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 Nova; 9-Pin (JEDEC No.E91)

**Basing Designation for BOTTOM VIEW:** 9LQ

### Pin Configuration

- Pin 6—Pentode Grid No.2
- Pin 7—Pentode Plate
- Pin 8—Diode Plate
- Pin 9—Internal Shield

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**RADIO CORPORATION OF AMERICA**

Electron Tube Division

Harrison, N. J.

DATA 1

8−60
PENTODE UNIT — AMPLIFIER — CLASS A1

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE .................. 300 max. volts
GRID-No.3 (SUPPRESSOR-GRID) VOLTAGE:
  Positive value .................. 300 max. volts
  Negative value .................. 300 max. volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE .. 300 max. volts
GRID-No.2 VOLTAGE .............. See Grid-No.2 Input Rating Chart
  at front of Receiving Tube Section
GRID-No.1 (CONTROL-GRID) VOLTAGE:
  Positive-bias value .............. 0 max. volts
  Negative-bias value .............. 50 max. volts
GRID-No.3 INPUT .................. 0.2 max. watt
GRID-No.2 INPUT:
  For grid-No.2 voltages up to
  150 volts ...................... 0.6 max. watt
  For grid-No.2 voltages between 150
  and 300 volts ................See Grid-No.2 Input Rating Chart
  at front of Receiving Tube Section
PLATE DISSIPATION ............... 3 max. watts
PEAK HEATER-CATHODE VOLTAGE:
  Heater negative with respect to cathode . 200 max. volts
  Heater positive with respect to cathode . 200° max. volts
BULB TEMPERATURE (At hottest point on
  bulb surface) ..................... 150 max. °C

DIODE UNIT

Maximum Ratings, Design-Maximum Values:

PLATE CURRENT .................. 1 max. ma

Characteristics, Instantaneous Test Condition:
Plate Current for plate volts = 10. .... 2 ma

Without external shield.
The dc component must not exceed 100 volts.
AVERAGE CHARACTERISTICS
Pentode Unit

$E_c = 6.3$ VOLTS
GRID NO. 3 AND INTERNAL SHIELD
CONNECTED TO CATHODE AT SOCKET.
GRID-NO. 2 VOLTS = 100

PLATE (I_B) OR GRID-NO. 2 (I_C2) MILLIAMPERES

92CM-10680
AVERAGE CHARACTERISTICS
Pentode Unit

$E_C = 6.3 \text{ VOLTS}$
PLATE VOLTS = 100
GRID $N \# 3$ AND INTERNAL SHIELD
CONNECTED TO CATHODE AT SOCKET.
GRID $N \# 2$ VOLTS = 100

TRANSCONDUCTANCE ($g_m$) — MICROMOHMS

PLATE (1A) OR GRID $N \# 2$ ($C_2$) MILLIAMPERES

GRID $N \# 1$ VOLTS

92CM-10674

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