



9001

9001

**DETECTOR AMPLIFIER PENTODE**

MIDGET TYPE

|                                     |                             |                  |
|-------------------------------------|-----------------------------|------------------|
| Heater                              | Coated Unipotential Cathode |                  |
| Voltage                             | 6.3                         | a-c or d-c volts |
| Current                             | 0.15                        | amp.             |
| Direct Interelectrode Capacitances: |                             |                  |
| Grid to Plate                       | 0.01 max.                   | $\mu\text{mf}$   |
| Input                               | 3.6                         | $\mu\text{mf}$   |
| Output                              | 3.0                         | $\mu\text{mf}$   |

Maximum Overall Length 1-13/16"

Maximum Seated Height 1-9/16"

Length from Base Seat to Bulb Top  
(excluding tip)1-3/16"  $\pm$  3/32"

Maximum Diameter

3/4"

Bulb

T-5-1/2

Base▲

Miniature Button 7-Pin

Pin 1-Grid

Pin 5-Plate

Pin 2-Cathode

Pin 6-Screen

Pin 3-Heater

Pin 7- $\left\{ \begin{array}{l} \text{Cathode,} \\ \text{Grid No. 3,} \\ \text{Internal} \\ \text{Shield} \end{array} \right.$ 

Pin 4-Heater



RCA Socket

Stock No. 9914

Mounting Position

BOTTOM VIEW

Any

*Maximum and Minimum Ratings Are Design-Center Values*AMPLIFIER

|                    |          |       |
|--------------------|----------|-------|
| Plate Voltage      | 250 max. | volts |
| Screen Voltage     | 100 max. | volts |
| Grid Voltage       | -3 min.  | volts |
| Plate Dissipation  | 0.5      | watt  |
| Screen Dissipation | 0.1      | watt  |

*Typical Operation and Characteristics - Class A<sub>1</sub> Amplifier:*

|                  |      |           |                  |
|------------------|------|-----------|------------------|
| Plate Voltage    | 90   | 250       | volts            |
| Screen Voltage   | 90   | 100       | volts            |
| Grid Voltage     | -3   | -3        | volts            |
| Plate Resistance | 1.0  | • approx. | megohm           |
| Transconductance | 1100 | 1400      | $\mu\text{mhos}$ |
| Plate Current    | 1.2  | 2.0       | ma.              |
| Screen Current   | 0.5  | 0.7       | ma.              |

*Typical Operation as Mixer in Superheterodyne Circuit:*

|                             |     |             |                  |
|-----------------------------|-----|-------------|------------------|
| Plate Voltage               | 100 | 250         | volts            |
| Screen Voltage              | 100 | 100         | volts            |
| Grid Voltage #              | -5  | -5 approx.  | volts            |
| Conversion Transconductance | -   | 550 approx. | $\mu\text{mhos}$ |

Shielding and r-f by-passing of each r-f amplifier stage may be required in order to prevent interstage coupling and to provide the shortest possible circuit returns when the tube is operated at the ultra-high frequencies. R-f by-passing can be accomplished by the use of small condensers having short leads placed close to the tube terminals. It may also be advisable in some applications to supplement the action of the by-pass condensers by r-f chokes close to the condensers in the return or supply leads for the grid, screen, #, ▲, •: See next page.

\*Temporary minimum length = 1-1/16".

← Indicates a change.

OCT. 1, 1943

RCA VICTOR DIVISION

DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

**DETECTOR AMPLIFIER PENTODE**

(continued from preceding page)

plate and heater. The 9001 has two cathode leads in order that the plate and screen r-f circuits may be completed with a minimum of circuit inductance in common with the grid circuit. The grid return may be connected to one cathode terminal and the plate and screen returns may be connected to the other cathode terminal.

- The cathode of the 9001, when operated from a transformer, should preferably be connected to the heater circuit. In the case of d-c operation of the heater from a storage battery, the cathode circuit is tied in either directly or through bias resistors to the negative battery terminal. In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.
- Greater than 1.0 megohm.
- \* The grid bias is minimum for an oscillator peak voltage of 4 volts. These values are optimum.

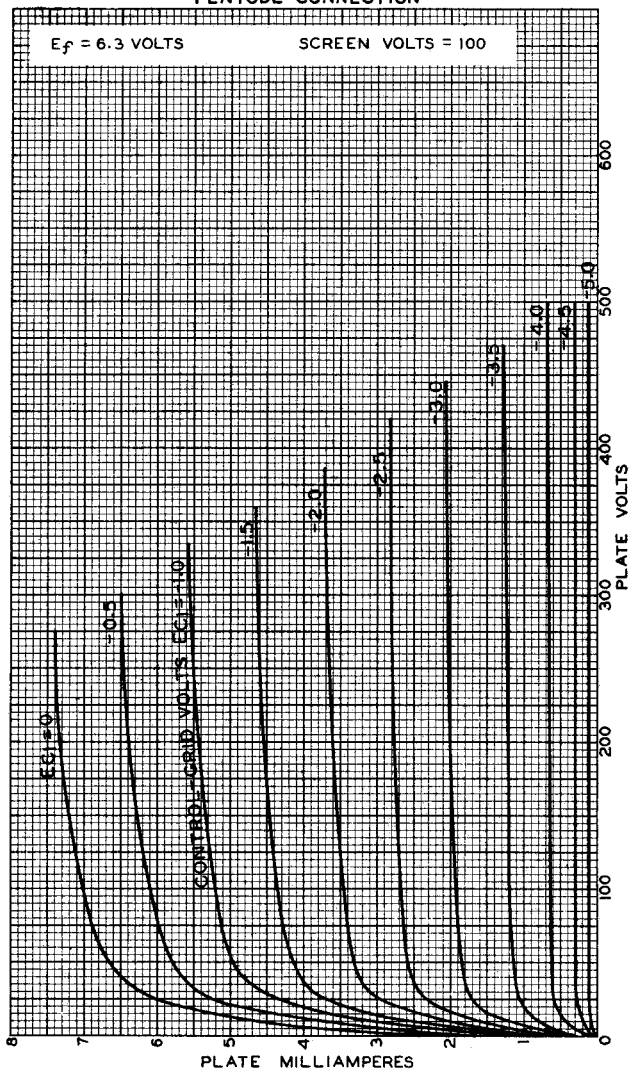
▲ The center hole in sockets designed for this base provides for the possibility that this tube type may be manufactured with the exhaust-tube tip at the base end. For this reason, it is recommended that in equipment employing this tube type, no material be permitted to obstruct the socket hole.



9001

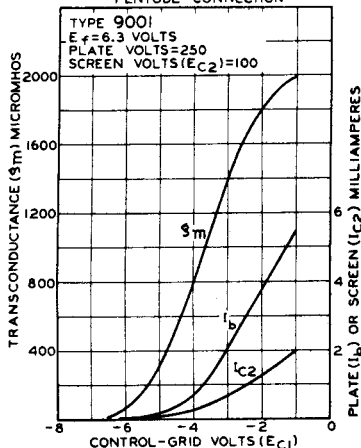
9001

# AVERAGE PLATE CHARACTERISTICS PENTODE CONNECTION

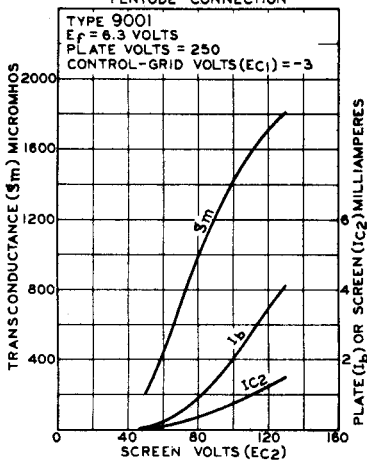




## DETECTOR AMPLIFIER PENTODE

AVERAGE CHARACTERISTICS  
PENTODE CONNECTION

92C-6286

AVERAGE CHARACTERISTICS  
PENTODE CONNECTION

92C-6287